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# LAND ON THE EDGE

THE LANDSCAPE EVOLUTION OF  
THE LINCOLNSHIRE COASTLINE

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Louth, Lincolnshire

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In addition to the above, I also need to express my thanks to Paul Cope-Faulkner of Archaeological Project Services for allowing me to use a processed greyscale plot of a magnetic gradiometer survey undertaken by Archaeological Project Services as fig. 13a; to Jacob Field for sharing his transcription of the Lincolnshire coastal zone sections of the Spare Beds and Stabling Survey of 1686 (TNA WO 30/48) with me; to Professor T. Spencer, of the Cambridge University Collection of Aerial Photography, for allowing me to use a historic aerial photograph as fig. 20, which is reproduced with permission of the Cambridge University Collection of Aerial Photography © Copyright reserved; to Jan Allen for helping me access the materials produced for the Viking Link and Triton Knoll projects, and to Mark Allen of Allen Archaeology for providing me with copies of their Triton Knoll materials, Candy Hatherley of Headland Archaeology for sending me their Triton Knoll materials, and Ruben Lopez Catalan of Network Archaeology for sharing their Viking Link project data; to Rachael Hall and Rosalind Buck of the National Trust for providing me with the archaeological and geoarchaeological assessment relating to NT Sandilands; to Katherine Selby for providing me with a copy of her and Sally Derrett's report on the Lincolnshire Coast Submerged Landscape; to Ian Simmons for allowing me to see a pre-publication copy of his book *Fen and Sea: The Landscapes of South-East Lincolnshire AD 500–1700* (Oxford, 2022) and for several thought-provoking discussions of the landscape history of the south-eastern portion of the study zone; to Ian Shennan for sharing some of his underlying work preparatory to the palaeogeographic maps he has published of the region with me, which helped considerably; to Helen Fenwick for sending me materials that were proving hard to source; and to Richard Watts of the Lincolnshire HER for answering my many queries and providing the large number of grey literature reports that needed to be consulted for this project. Finally, it ought to be noted that photographs and postcards that appear without further attribution in this work are either images taken by the author or scans of early twentieth-century postcards from the author's own collection.

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## Land on the Edge: Investigating the Landscape History of the Lincolnshire Marsh and Coastline

# Introduction

The Lincolnshire coastline from Boston to Grimsby is arguably one of the most dynamic and fascinating landscapes in England, having seen enormous changes in both its geography and utilisation since the last Ice Age. Once the high ground on the westernmost edge of the now-drowned Doggerland that connected England to the Continent, the Lincolnshire coastal zone saw a dramatic inundation by the rising tide that began around 8,000 years ago and continued on and off right through to the medieval period and beyond. This has resulted in a complex and intriguing coastal landscape that still bears the traces of multiple large-scale shifts in both its character and the way that it has been used by its inhabitants. A primary aim of the *Land on the Edge* project has been to understand and present the major aspects of this dynamic evolution, from the Mesolithic period through to the modern era, and so help develop our understanding of this landscape. This first section outlines the general landscape background to this project and the sources of evidence used. Subsequent sections will describe the results of the analysis of this material.

## The *Land on the Edge* project

The *Land on the Edge* project forms a companion piece to the Lincolnshire County Council/Historic England *Inns on the Edge* project. The latter is concerned with the current and lost inns and public houses of the Lincolnshire coastline from Boston through to Grimsby, an often understudied but locally vital element within the historic landscape. The project aims to establish for the first time a catalogue of the present and lost inns along the Lincolnshire coast, recording their stories, current usage and condition, as well as analysing them as a group. The *Land on the Edge* project is designed to complement and extend this, allowing these buildings to be situated within their wider landscape context. By doing this, it is possible to show that the inns and public houses along the Lincolnshire coastal zone not only reflect the past landscapes and histories of this region, but also played a key role in creating the current version of the coastal zone, thus underlining their value as a heritage asset with the wider historic environment.

In order to achieve this, it was determined that a full study of the landscape evolution of the whole 120 kilometres (75 miles) of coastline between Boston and Grimsby was required and would be, moreover, a beneficial contribution to the wider historical understanding of this area of Lincolnshire (fig. 1).<sup>1</sup> Although the Lincolnshire Marsh and coastline has generated much research over the years, there is a clear need for an interdisciplinary overview that can bring this varied material together, synthesising and analysing, as well as combining it with new evidence and approaches that have not been previously available. Whilst there have been a wide variety of academic papers, books, research reports and unpublished theses that deal with specific aspects or periods, including important work by Tom Lane, Arthur Owen, Helen Fenwick, Ian Simmons, Herbert Hallam, Simon Pawley, David Brew, Joan Thirsk, Robert van de Noort and others,<sup>2</sup> the closest we have currently

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<sup>1</sup> The length of coastline is based on measurement of the Ordnance Survey 1:250,000 scale colour raster map of June 2021, available under an OS OpenData licence; differing maps will, of course, give differing estimates of the length of the coastline, increasing with their level of accuracy, but the 1:250,000 map was felt to be a reasonable compromise for this calculation.

<sup>2</sup> For example, T. W. Lane, *Mineral from the Marshes: Coastal Salt-Making in Lincolnshire* (Heckington, 2018); T. W. Lane, *The Fenland Project Number 8: Lincolnshire Survey, the Northern Fen-Edge* (Sleaford, 1992); S. Ellis, H. Fenwick, M. Lillie and R. Van der Noort (eds), *Wetland Heritage of the Lincolnshire Marsh: An Archaeological Survey* (Hull, 2001); A. E. B. Owen, 'Coastal erosion in East Lincolnshire', *Lincolnshire Historian*, 9 (1952), 330–41; A. Owen (ed.), *The Medieval Lindsey Marsh: Select Documents* (Woodbridge, 1996); J. Thirsk, *English Peasant Farming: The Agrarian History of Lincolnshire from Tudor to Recent Times* (London 1957); H. E. Hallam, *Settlement and Society: A Study of the Early Agrarian History of South Lincolnshire* (Cambridge, 1965); R. Van der Noort, *The Humber Wetlands: The Archaeology of a Dynamic Landscape* (Bollington, 2004); D. Brew, 'Holocene lithostratigraphy and broad scale evolution of the Lincolnshire





Figure 1: Map of the Lincolnshire coastline, showing areas inland of the coastal zone that lie above 3m OD in grey. The study zone extends from Boston in the south to Cleethorpes and Grimsby in the north and is defined by the total area enclosed by red rectangles; each rectangle and its number relates to the map-views into which the coastal zone is divided for analysis in Section 2 (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

to a single-text history of this fascinating and important landscape that draws on all available sources is David Robinson's *The Book of the Lincolnshire Seaside*, first published in 1981.<sup>3</sup> This does not pretend to offer a full academic analysis, however, and more recent finds, discoveries and interpretations mean that the brief pen portraits he offered there now need considerable revision and expansion if we are to properly understand the development and evolution of Lincolnshire's rich and important coastal zone.

In considering all of this, it needs to be emphasised that the Lincolnshire coastline has seen enormous changes in both its geography and utilisation over the period covered by this project (c. 12,700 BC to today). The present-day Lincolnshire coastline of dunes and resort towns is relatively recent in origin, located on the seaward edge of a flat, wide plain of agricultural land around 5–10 kilometres wide known as the Outmarsh.<sup>4</sup> This stretches from Humberston south of Cleethorpes all the way down to Skegness

and Wainfleet and mainly lies around 1.5–2.5 metres above sea-level, well below the mean high-water level of spring tides on the Lincolnshire coast (around 3 to 3.4 metres above Ordnance Datum). To the south-west of Skegness, this extraordinarily low-lying, wide coastal belt continues down to Boston and beyond (known in part as the Low Grounds), although here—as in the area between Tetney and North Somercotes—it is fronted by a wide belt of medieval industrial waste-mounds, partly reclaimed saltmarshes, and silted former channels that stand slightly higher than the inland areas and so offer a degree of protection from the sea.

Despite the whole coastal zone now lying close to sea-level, it once represented higher ground on the westernmost edge of the now-drowned Doggerland that connected England to the Continent, an area that currently forms the bottom of the North Sea.<sup>5</sup> From the Mesolithic period onwards, this higher ground saw a

Outmarsh, eastern England', *East Midlands Geographer* 20.1 (1997), 20–32; D. S. Brew and G. Evans, 'The stratigraphy and origin of the Tofts ridge in north-western Fenland, eastern England', *Proceedings of the Geologists' Association* 129 (2018), 135–43; I. Simmons, *Fen and Sea: The Landscapes of South-East Lincolnshire AD 500–1700* (Oxford, 2022); S. Pawley, *Lincolnshire Coastal Villages and the Sea c. 1300–1600: Economy and Society* (University of Leicester PhD thesis, 1984); H. Fenwick, *The Lincolnshire Marsh: Landscape Evolution, Settlement Development and the Salt Industry* (University of Hull PhD Thesis, 2007).

<sup>3</sup> D. N. Robinson, *The Book of the Lincolnshire Seaside* (Buckingham, 1981).

<sup>4</sup> Prior to the mid-twentieth century, the term 'Outmarsh' primarily meant land beyond the sea-bank, but it is now generally used for the whole of the flat coastal plain (which was originally all coastal marsh, as is discussed below).

<sup>5</sup> B. J. Coles, 'Doggerland: a speculative survey', *Proceedings of the Prehistoric Society*, 64 (1998), 45–81; I. Shennan *et al.*, 'Modelling western North Sea palaeogeographies and tidal changes during the Holocene', in I. Shennan and J.

dramatic inundation as a result of rapidly rising sea-levels that first created the North Sea and then led to the former high ground on the modern Lincolnshire coast being buried under many metres of marine alluvium.<sup>6</sup> The high water mark eventually stabilizing 5–10 kilometres or more inland from its current location along the east coast, a position it occupied on and off well into the early medieval era.<sup>7</sup> The wide coastal plains that developed along here were, as we shall see, utilised in many ways, including for salt-making, trading and grazing, and subsequent periods continued to see important changes, from the settlement of these wide wetlands and their reclamation, through to the erosion and loss of multiple settlements and ports—such as Mablethorpe St Peter and Old Skegness—in others. This coastal zone can also be shown to be historically significant, playing a vital and changing role in, for example, maritime trade from the medieval period onwards, the defence of the realm (including during the Second World War, but also much earlier as well), the agricultural support of the wider region, and tourism and leisure, from eighteenth-century inns and bathing-houses through to the growth of the resort towns. All of these have left their mark on the ever-changing landscape, which represents an intriguing palimpsest of the many roles that it has played and continues to play.

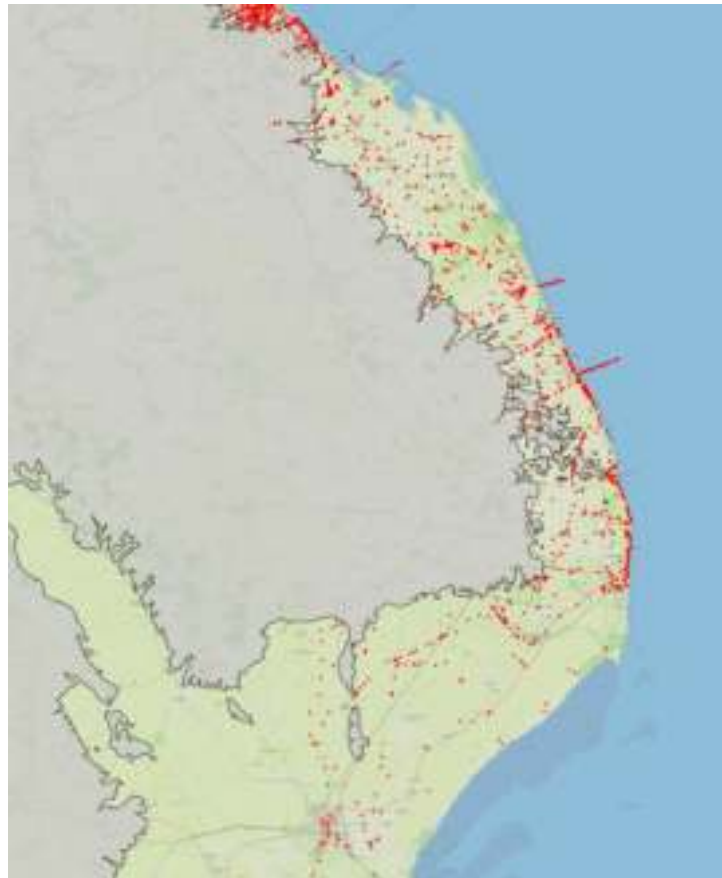


Figure 2: The location of boreholes and other records of the underlying Mesolithic landscape consulted for the present project (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

Although individual elements of this landscape evolution and history have been researched in detail in the past, by a wide variety of people and bodies, this material is occasionally contradictory in its conclusions and has often—though not always—relied on only one or two sources of evidence, rather than all the available data. The aim of this project is to take a thoroughly interdisciplinary approach and gather, synthesise and analyse all of the available evidence and previous discussions relating to the above broad-brush development and history of this region, in order to produce an account of how this landscape evolved and changed over time at both a regional level and a local one. The latter question, of how these changes created the local landscapes of the coastal zone, is of particular importance when it comes to understanding how the inns and pubs of the Lincolnshire coastline fit into, reflect and developed their landscapes, and can only be answered by bringing together all the available evidence and producing detailed reconstructions of the local landscapes. Needless to say, such work necessarily

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Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 299–319; V. Gaffney *et al*, *Europe's Lost World, the Rediscovery of Doggerland* (London, 2009).

<sup>6</sup> Shennan *et al*, 'North Sea palaeogeographies', p. 314; see also C. Green, *The Origins of Louth: Archaeology and History in East Lincolnshire 400,000 BC–AD 1086* (Louth, 2014), p. 21 (fig. 10) for a simplified version of these maps.

<sup>7</sup> See, for instance, Robinson, *Lincolnshire Seaside*, pp. 11–18; P. Davies and R. Van der Noort, 'Prehistoric landscape development of the Lincolnshire coastal area', *East Midlands Geographer* 18 (1995), 3–11; Fenwick, *Lincolnshire Marsh*; Simmons, *Fen and Sea*, pp. 1–7; Ellis *et al* (eds.), *Wetland Heritage of the Lincolnshire Marsh*, 137–58.

involves the gathering together of a large quantity of geological, archaeological, documentary, remote sensing, photographic, cartographic, and place-name work and associated data from a wide variety of sources. These sources and their uses can be enumerated as follows.

## Sources of evidence

### Geological, borehole and scientific data

Geological and scientific data sources have been frequently relied upon by researchers who have studied the early history of the Lincolnshire marshland and coastline. Some of the earliest work along the coastline establishing that the current flat plain of the Outmarsh had its origins in repeated marine inundations of an underlying hummocky and hillocky ground surface was undertaken by geologists and geographers such as A. J. Jukes-Browne, H. H. Swinnerton and D. N. Robinson.<sup>8</sup> Likewise, the Fenland Survey work on the part of our study area from Boston to Wainfleet made extensive use of geological data to show where land flooded first and dryer land may have persisted, as have recent surveys of the history of the Tofts of the Wainfleet area and the evolution of the Lincolnshire Marsh.<sup>9</sup> Such material has often proven to be of particular use by those concerned with the earliest periods, such as the question of the extent and origin of the submerged forests of the Lincolnshire coastline and the nature and rate of the flooding of prehistoric Doggerland,<sup>10</sup> but it also has much applicability to more recent times too. In the current project, geological and scientific data was used to look at questions such as the maximum extent of marine inundation inland of the current coastline in the past; whether we can reconstruct the underlying landscape of the Outmarsh prior to the post-Glacial marine inundation; and the date of both the marine inundation and dune formation at various points along the coastal zone. To do this, data was gathered from a wide range of sources, including:

- Geological maps and records of boreholes held by the British Geological Society, accessed primarily via their online map viewers and their published maps and reports.<sup>11</sup> The geological maps produced by the BGS are the usual starting point for historical analysis of the evolution of the Lincolnshire coastline. The mapped extent of both glacial till and marine alluvium in the Outmarsh reflects those areas that were either above the maximum marine inundation in this region, and so would have been above the highest tides (either as coastline or islands), or inundated at some point by the sea in the period between the Mesolithic era and the early medieval period. Equally valuable are the records of boreholes held by the BGS, as these can be used to reconstruct the underlying contours of the pre-flooding landscape. This has already been done to some degree both in the far north of our study region, around Tetney and Grimsby,<sup>12</sup> and also in the far south between Boston and Wainfleet.<sup>13</sup> The current project re-

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<sup>8</sup> A. J. Jukes-Browne, *The Geology of Part of East Lincolnshire, including the country near the towns of Louth, Alford, and Spilsby* (London, 1887); H. H. Swinnerton, 'The post-glacial deposits of the Lincolnshire coast', *Quarterly Journal of the Geological Survey*, 87 (1931), 360–75; D. N. Robinson, 'Coastal evolution in north-east Lincolnshire', *East Midlands Geographer* 5 (1970), 62–70; D. N. Robinson, 'The buried forest of Lincolnshire', in N. Field and A. White (ed.) *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 6–10.

<sup>9</sup> Brew and Evans, 'Origins of the Tofts'; D. S. Brew *et al*, 'Holocene sea-level history and the coastal evolution of the north-western Fenland, eastern England', *Proceedings of the Geologists' Association* 126 (2015), 72–85; M. P. Waller *et al*, *The Fenland Project Number 9: Flandrian Environmental Change in Fenland* (Cambridge, 1994); Lane, *Fenland Project 8*; Brew, 'Evolution of the Lincolnshire Outmarsh'.

<sup>10</sup> S. Derrett and K. Selby, *The Lincolnshire Coast Submerged Landscape: The Current Extent and Composition of the Submerged Forest Deposits from Mablethorpe to Skegness* (unpublished report, May 2020); Shennan *et al*, 'North Sea palaeogeographies'.

<sup>11</sup> The British Geological Survey's various online map viewers are available at <https://www.bgs.ac.uk/geological-data/map-viewers/> and <https://webapps.bgs.ac.uk/data/maps/> (accessed April 2021 to March 2022); N. G. Berridge and J. Pattison, *Geology of the Country Around Grimsby and Patrington* (London, 1994).

<sup>12</sup> Berridge and Pattison, *Grimsby and Patrington*, pp. 63–4.

<sup>13</sup> Waller *et al*, *Fenland Project 9*, especially p. 64; D. S. Brew *et al*, 'Holocene sedimentary evolution and palaeocoastlines of the Fenland embayment, eastern England', in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 253–73.

examined all borehole records in these areas and in the zone in between, to allow the creation of a contour model of whole of the Lincolnshire Marsh that can better help us to understand the chronology of its flooding, whilst also slightly revising previous models (figs 2, 92). BGS borehole and well records are particularly common in the area of the two major urban centres along the coastline, Boston and Grimsby, but enough exist in other areas—notably down the eastern coastline—to be useful, especially when combined with other sources of geological data.

- Borehole and excavation records resulting from other bodies and publications. These supplemented the publicly accessible borehole records held by the BGS and were especially helpful in filling in some of the gaps in coverage. Of particular note are the publications of David Brew on the geology of the Wash and Marsh areas, which include records created by the Land–Ocean Interaction Study (LOIS);<sup>14</sup> excavation reports held by the Lincolnshire Historic Environment Record, which sometimes feature geological data, most importantly when archaeological excavations encounter either glacial till or peat deposits in the Outmarsh; and the borehole and excavation records created by the Humber Wetlands Project.<sup>15</sup> The former can tell us about the existence of former ‘islands’ of dry land in the coastal zone, sometimes previously unrecorded as at North Somercotes Church End and Saltfleetby All Saints, whilst the latter offer evidence for the existence of fresh-water bogs, indicative either of the waterlogging that immediately preceded marine inundation or a period of lower sea-levels that saw freshwater wetlands develop on the former saltmarshes.
- Environmental studies, including excavations and borehole sequences, undertaken ahead of major infrastructure and development projects. These have the potential to be extremely informative as to both the prior landscapes of the Lincolnshire coastal zone and historical landscapes, especially where they cover considerable areas. The Triton Knoll cable route is particularly informative in this regard, with a detailed sequence of boreholes and identified ancient land surfaces that stretch from Anderby Creek down past Burgh le Marsh and then across the East and West Fens before crossing the Witham valley.<sup>16</sup> Similarly, the borehole study undertaken ahead of the creation of National Trust Sandilands has helped supplement the image of the coastal evolution here outlined previously from LOIS data, and the Hornsea Offshore Wind Farm Project Two provides valuable information on the extent and nature of the medieval salt-making industry in the Tetney area.<sup>17</sup>
- Scientific dating evidence produced for various projects and archaeological excavations. A wide range of reports (both published and unpublished/grey literature) include radiocarbon dating evidence for surviving organic material encountered in boreholes, excavations and exposures, which enables the dating of early sea-level changes. This has been particularly used by the LOIS project to establish dated sea-level rise curves for both the Lincolnshire Marsh and the Wash region, which when combined with models of the underlying post-glacial landscape can allow us to envisage how the Lincolnshire coastal zone was flooded and created.<sup>18</sup> It has also been used to study the period at which the various ‘submerged forests’ along the Lincolnshire coast were swamped by the rising tides, as at Cleethorpes, where the submerged forest has been dated to the Late Neolithic (and an axe-hammer was dated to the Bronze Age, suggesting continued activity post-inundation).<sup>19</sup> In addition, other dating methods such

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<sup>14</sup> Brew, ‘Evolution of the Lincolnshire Outmarsh’; Brew *et al*, ‘Coastal evolution of the north-western Fenland’. Note, some of the LOIS records are in the publicly available BGS record, but not all are.

<sup>15</sup> Ellis *et al* (eds.), *Wetland Heritage of the Lincolnshire Marsh*.

<sup>16</sup> J. Rackham, R.Scaife and C. Langdon, *Geoarchaeological Stage 4 Analysis: For the Triton Knoll Electrical Scheme*, Allen Archaeology and The Environmental Archaeology Consultancy Report Number AAL 2021012 (2020).

<sup>17</sup> M. Stenton, L. Horsley and T. Keyworth, *Former Sandilands Golf Club, Alford, Lincolnshire: Archaeological and Geoarchaeological Desk-Based Assessment*, Trent and Peak Archaeology Project No. 106/2021 (2021); RPS Group/SMart Wind, *Hornsea Offshore Wind Farm Project Two – Environmental Statement Volume 6 - Onshore Annex 6.6.3 – Geophysical Survey Report* (2015) and *Hornsea Offshore Wind Farm Project Two – Environmental Statement Volume 6 - Onshore Annex 6.6.5 – Trial Trenching Report* (2015).

<sup>18</sup> See, for example, Shennan *et al*, ‘North Sea palaeogeographies’, and I. Shennan *et al*, ‘Holocene isostasy and relative sea-level changes on the east coast of England’, in I. Shennan and J. Andrews (eds.), *Holocene Land–Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 276–98; Brew *et al*, ‘Palaeocoastlines of the Fenland embayment’. See also Green, *Origins of Louth*, p. 24 (fig. 12) for a simplified version of this curve.

<sup>19</sup> K. Leahy, ‘A dated stone axe-hammer from Cleethorpes, South Humberside’, *Proceedings of the Prehistoric Society* 52 (1986), 143–152; A. J. Clapham, *The Characterisation of Two Mid-Holocene Submerged Forests* (Liverpool John Moores University PhD Thesis, 1999); Derrett and Selby, *The Lincolnshire Coast Submerged Landscape*.

as luminescence techniques (OSL or IRSL) can provide interesting insights, showing, for example, that the dunes at Moggs Eye beach, Huttoft, were formed around 750 years, something that would seem to agree closely with the age of these dunes suggested by geologists working on the general evolution of the coastal zone.<sup>20</sup>



Figure 3: The long, thin fields preserved around Saltfleetby on the 1907 OS Six Inch map, which documentary records indicate are medieval divisions of the common wetlands known as 'long lands' (Source: National Library of Scotland).

## Documentary sources

Another key data source is documentary materials and the historical studies that are based on these. Such items obviously only really have significant utility from around the later eleventh century AD onwards, as before this there are few surviving local documents from Lincolnshire.<sup>21</sup> Nonetheless, they can offer much to any study of the landscape evolution of the Lincolnshire coastline in this period and after. For example, such materials can help establish the chronology, significance, and incidence of coastal losses in the medieval to modern periods along the east coast, which would not be known about otherwise as they leave no landscape traces, such as the drowning of Old Skegness and Mablethorpe St Peter.<sup>22</sup> They can also link landscape changes visible on maps to documented alterations, such as the documentary evidence for 'long lands'/dales on the Outmarsh which indicate that these represent division of the common wetlands back into at least the twelfth century (fig. 3).<sup>23</sup> Documentary sources likewise provide evidence on changes that took place prior to the availability of good-

<sup>20</sup> M. L. Clarke and H. M. Rendell, 'The development of a methodology for luminescence dating of Holocene sediments at the land-ocean interface', in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 69–86; Robinson, *Lincolnshire Seaside*, pp. 13, 17.

<sup>21</sup> See, for example, K. Leahy, *The Anglo-Saxon Kingdom of Lindsey* (Stroud, 2007), P. H. Sawyer, *Anglo-Saxon Lincolnshire* (Lincoln, 1998), and C. Green, *Britons and Anglo-Saxons: Lincolnshire AD 400 – 650*, second edition (Lincoln, 2020), all of which rely primarily on either archaeological and linguistic evidence or documents of wider regional application for the era prior to the eleventh century.

<sup>22</sup> A. E. B. Owen, 'Mablethorpe St Peter and the sea', *Lincolnshire History and Archaeology* 21 (1986), 61–2; Pawley, *Lincolnshire Coastal Villages and the Sea*, pp. 73–84.

<sup>23</sup> M. Gardiner, 'Dales, long lands, and the medieval division of land in eastern England', *Agricultural History Review* 57 (2009), 1–14.

quality mapping, as can be seen in the northern Fens around Wainfleet.<sup>24</sup> Finally, such materials can also provide detailed evidence relating to the process and chronology of landscape change in the medieval to modern period, for example the creation of new land from saltern mounds in both the Marshchapel area and the Tofts, or the establishment of new urban centres along the coast in the nineteenth and twentieth centuries.<sup>25</sup> Of particular note with respect to documentary sources are the following:

- Arthur Owen's studies of the medieval Lindsey Marsh from the 1950s onwards. These make extensive use of the medieval and early modern documentary sources to consider the evidence for coastal erosion, the upkeep of the Lincolnshire sea-defences, the location of medieval ports along the Lincolnshire coast, and the medieval use of the coastal marshes, culminating in an important volume that brings together many of the relevant documents.<sup>26</sup> For the southern area around Wainfleet, an similar service has recently been rendered by Ian Simmons, who has studied the difficult and complex documentary sources for the coastal changes in this area in order to create a coherent account of the rise and fall of Wainfleet Haven and the surrounding coastal inlets backing on to the East Fen in the medieval era.<sup>27</sup>
- Accounts of the drainage works on the Lincolnshire Marsh and coastal zone found in local documents. William Dugdale's *History of Imbanking and Drayning of Divers Fenns and Marsbes* (1662) is particularly useful here, drawing on numerous documents which include much of interest, especially for the area around Skegness, as are the Court Rolls of the Manor of Ingoldmells. The latter include considerable details on various drainage disputes relating to the wide Outmarsh here, along with valuable information on the port of Old Skegness and sea-banks in this area.<sup>28</sup>
- Early documentary sources, such as the recently discovered text describing the route taken by twelfth-century crusaders along the English sea coast. Written by Roger of Howden (*fl.* 1174–1201), this text makes reference to various places and ports along the Lincolnshire coast, confirming the early existence of some and the importance of others, notably Old Skegness, which is described as one of the best ports on the Lindsey coast and 'a good anchorage in all winds, except from the south and south-west', confirming the reconstructions of the site of this lost town by local historians.<sup>29</sup> Likewise, recent analysis

<sup>24</sup> Simmons, *Fen and Sea*.

<sup>25</sup> I. Simmons, 'The landscape development of the Tofts of south-east Lincolnshire 1100–1650', *Landscape History* 36 (2015) 9–24; E. H. Rudkin and D. M. Owen, 'The medieval salt industry in the Lindsey Marshland', *Lincolnshire Architectural and Archaeological Society Reports and Papers* 9 (1959–60), 76–84; T. Maybury, *A Century of Change on the Lindsey Marshland: Marshchapel 1540–1640* (University of Hull PhD Thesis, 2011); R. Neller, 'Skegness, Mablethorpe and Cleethorpes: contrasts of land ownership and investment in the development of seaside resorts', *Lincolnshire History and Archaeology* 47 (2012), 35–47.

<sup>26</sup> These include A. E. B. Owen, 'Coastal erosion in East Lincolnshire', *Lincolnshire Historian*, 1 (1952), 330–41; 'The early history of Saltfleet Haven', *Lincolnshire Architectural and Archaeological Society Reports and Papers* 5.2 (1954), 87–100; 'Wilgrip Haven and Theddlethorpe', *Lincolnshire Historian* 2 (3) (1955), 37–41; "'The Levy Book of the Sea": the organisation of the Lindsey Sea Defences in 1500', *Lincolnshire Architectural and Archaeological Society Reports and Papers* 9.1 (1961), 35–48; 'The upkeep of the Lindsey sea-defences, 1550–1650', *Lincolnshire Historian* 2 (10) (1963), 23–30; 'Hafdic: a Lindsey name and its implications', *Journal of the English Place-Name Society*, 7 (1974–5), 45–56; 'Salt, sea banks and medieval settlement on the Lindsey coast', in N. Field and A. White (eds.), *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 46–9; 'Mablethorpe St Peter'; 'Beyond the sea bank: sheep on the Huttoft Outmarsh in the early thirteenth century', *Lincolnshire History and Archaeology* 28 (1993), 39–41; *Medieval Lindsey Marsh*.

<sup>27</sup> I. Simmons, *Fen and Sea*, draws together much of his work on this area, although more details about specific topics can be had from his website *Margins of the East Fen: Historic Landscape Evolution* (<https://www.dur.ac.uk/east-lincs-history/>) and the resulting publications, including 'Rural landscapes between the East Fen and the Tofts in south-east Lincolnshire 1100–1500', *Landscape History* 34 (2013), 81–90; 'Creating dry land in S.E. Lindsey (Lincolnshire, England) before AD 1550', *Water History* 6.3 (2014), 211–25; 'Development of the Tofts'; 'The emergence of the south Lindsey coast of the Wash before Domesday', *Midland History* 42.2 (2017), 139–158; and 'Medieval and early modern management of the River Lymn and Wainfleet Haven (east Lincolnshire, England)', *Landscape History* 39.2 (2018), 5–21.

<sup>28</sup> W. Dugdale, *The History of Imbanking and Drayning of Divers Fenns and Marsbes* (London, 1662); W. O. Massingberd, *Court Rolls of the Manor of Ingoldmells in the County of Lincoln* (London, 1902).

<sup>29</sup> P. Hughes, 'Roger of Howden's sailing directions for the English coast', *Historical Research* 85 (2012), 576–96 at p. 589; P. G. Dalché, *Du Yorkshire a L'Inde: une Géographie Urbaine et Maritime de la fin du XIIe Siècle (Roger de Howden?)* (Genève, 2005), p. 175; W. Kime, *The Book of Skegness* (Buckingham, 1986), p. 12; Robinson, *Lincolnshire Seaside*, p. 21.



Figure 4: Britain according to al-Idrīsī in the twelfth century, orientated with south at the top of the image. Note, Scotland is the small ‘peninsula’ at the bottom of the map, whilst the long thin peninsula on the right is Cornwall, which is said to ‘resemble a bird’s beak’. The original sectional Arabic maps as found in a number of medieval manuscripts have been combined in this image and the Arabic script transliterated/expanded by Konrad Miller. The towns named on the east coast (on the left here) and the rivers can be identified as follows, anticlockwise from top-left: Dover; the River Thames; Great Yarmouth; the River Witham with Boston and Lincoln inland on it; Grimsby; and York. The northern bank of the Humber is omitted entirely, so that York is consequently wrongly placed on the coast and close to the border with Scotland (Source: K. Miller/[Wikimedia Commons](#), PD).

of al-Idrīsī’s mid-twelfth-century Arabic account and map (fig. 4) of eastern England suggests that it has much to tell us of the perceived urban and communication landscape in that era, whilst the Spare Beds and Stabling Survey of 1686 is of considerable use in showing where the post-medieval inns were located and thus how these might relate to significant ports.<sup>30</sup>

- Later documents held by the local archives and online resources. These are, needless to say, of considerable utility when it comes to understanding how the coastal landscape developed from the eighteenth century onwards, with the alehouse recognizances of the Lindsey Quarter Sessions providing, for instance, an invaluable overview of the landscape of inns as it existed at the end of the eighteenth and start of the nineteenth centuries, when the bathing and holiday industry was in its infancy.<sup>31</sup> From the nineteenth century onwards, historical directories offer a valuable insight into the development of coastal settlements as well as the location and growth in inns and public houses, whilst historical newspaper reports from the late eighteenth century onwards (beginning with the *Stamford Mercury*) offer considerable detail as to the growth of bathing inns and the emergence of resorts. From the end of the nineteenth century onwards, photographic materials and posters also become increasingly important, and archives of historical postcards are valuable for understanding how the coast was used and experienced by day-trippers and holiday-makers.<sup>32</sup>

<sup>30</sup> Spare Beds and Stabling Survey of 1686 (TNA, WO 30/48); C. Green, ‘Al-Idrīsī’s twelfth-century description and map of Lincolnshire’, *Lincoln Record Society News Review* 18 (2021), 2–4.

<sup>31</sup> The Alehouse Recognizances are located in the Lincolnshire Archives e.g. LQS/D/9/1/3, ‘Alehouse Recognizances for Bolingbroke Soke E & W, Candlehoe Marsh, Wold Wapentakes, 1790–1828.

<sup>32</sup> Historical directories were primarily sourced from the University of Leicester’s *Special Collections Online: Historical Directories of England & Wales*, <https://specialcollections.le.ac.uk/digital/collection/p16445coll4> (accessed 2021–2);

- Detailed local historical studies of particular places, areas, or topics. A number of academic studies of particular parishes have been undertaken in recent years which are of considerable interest, especially those concerned with the resorts such as Neller’s on Mablethorpe and Dowling’s on Cleethorpes, as are more popular volumes like Winston Kime’s books on Skegness and the Lincolnshire Coast and older documentary studies of antiquarian historians, such as Oldfield’s study of Wainfleet and the wapentake of Candleshoe from 1829.<sup>33</sup> Also valuable are more wide-ranging academic studies, such as Simon Pawley’s thesis on the Lindsey coastline in the medieval and early modern periods, which draws together a considerable wealth of documentary evidence relating to early ports and coastal life that is not available elsewhere.<sup>34</sup>

## Place-name data

A related source is place-name data, including both settlement and minor names, which is primarily drawn from early documentary sources but forms an evidence-class in its own right. The main parish names of the Lincolnshire coastline have been studied in detail by Kenneth Cameron, with additions and revisions made more recently by Richard Coates,<sup>35</sup> and this and similar material again has much to contribute. It can, for example:

- Provide a potential chronological perspective on the colonisation and use of the Outmarsh that extends back into the early medieval period, with the languages used in the names of settlements situated on the edge of the dry Middle Marsh—the area between the Outmarsh and the Wolds—in the northern part of the study zone showing a distinct contrast with those used for settlements actually located within the Outmarsh there (fig. 5).
- Offer an independent perspective on landscape in periods without documentation and/or mapping. Conisholme, for instance, contains the Scandinavian element *holme*, ‘island’, whilst Helsey may represent a Scandinavian name meaning ‘the island with a shed for drying fish (*hjaltr*)’ and Slackholme is the ‘mud-slick island’, all helping to confirm the wet and watery nature of places well inland of the current coastline. Somercotes likewise has an Old English name referring to huts or cottages used on a seasonal basis, presumably related to the widespread evidence for medieval salt-making on this part of the coastline, whilst the settlement of Ingoldmells and the nearby lost hamlets of East and West Meales, near Skegness, all contain the Scandinavian term for dunes or sandhills, *melr*, suggesting dunes may have formed here earlier than they did further north at Moggs Eye.
- Tell us about early land use and activities in the coastal zone and on its margins prior to the existence of significant documentation. So, the various names involving Old English *tōt*, ‘look-out’, and *burh*, ‘fortification’ (such as Toote Hill, Little Coates, and Burgh-le-Marsh) offer evidence for an Old English militarisation of the coastal zone, potentially reflecting a response to the threat from Viking raiders, suggesting that the twentieth-century concept of a defensive ‘coastal crust’ may have much earlier roots.<sup>36</sup> Likewise, the Domesday-name for Skegness, *Tric*, is believed to be an even earlier witness to

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newspapers were accessed via the *British Newspaper Archive* (<https://www.britishnewspaperarchive.co.uk/>) and *Gale Primary Sources: British Library Newspapers and Seventeenth and Eighteenth Century Burney Newspapers Collection*. Postcards and early images of resorts were accessed via a variety of sources, including the Library of Congress, the Internet Archive, the Science Museum, and the author’s own collection.

<sup>33</sup> Neller, ‘Skegness, Mablethorpe and Cleethorpes’; A. Dowling, *Cleethorpes: The Creation of a Seaside Resort* (Chichester, 2005); Maybury, *Marshchapel 1540–1640*; M. Watkinson, *The Microhistory of a Lincolnshire Parish: Humberston, 1750–1850* (University of Leicester PhD Thesis, 2017); Massingberd, *Manor of Ingoldmells*; Kime, *Skegness*; W. Kime, *The Lincolnshire Seaside* (Stroud, 2005); J. Wild, *Tetney, Lincolnshire: A History* (Grimsby, 1901); E. Oldfield, *A Topographical and Historical Account of Wainfleet and the Wapentake of Candleshoe, in the County of Lincoln* (London, 1829); G. Oliver, *The Monumental Antiquities of Great Grimsby* (Hull, 1825).

<sup>34</sup> Pawley, *Lincolnshire Coastal Villages and the Sea*.

<sup>35</sup> K. Cameron, *Dictionary of Lincolnshire Place-Names* (Nottingham, 1998); R. Coates, ‘Reflections on some major Lincolnshire place-names. Part one: Algarkirk to Melton Ross’, *Journal of the English Place-Name Society*, 40 (2008), 35–95; R. Coates, ‘Reflections on some major Lincolnshire place-names. Part two: Ness wapentake to Yarborough’, *Journal of the English Place-Name Society*, 41 (2009), 57–102.

<sup>36</sup> See on place-names and Viking era defence, J. Baker and S. Brookes, ‘Signalling intent: beacons, lookouts and military communications, in M. C. Hyer and G. R. Owen-Crocker (eds.), *The Material Culture of the Built Environment in the Anglo-Saxon World* (Liverpool, 2017), pp. 216–34.



significant activity on the edge of the coast, arguably having its origins in a Romano-British name for a ferry-port (Latin *Traiectus*), something that offers support to antiquarian records of the drowned town of Old Skegness being walled (usually an indication of Roman origins).<sup>37</sup> Similarly, the minor name ‘Summereats’ or similar is found in multiple parishes all down the coast and probably indicates summer pasturing on the coastal marshes, reflecting an early origin for the use of the Outmarsh as a ‘grazing marsh’ for the surrounding drier villages.

- Help identify early sea-defences and creeks. Repeated medieval name elements like *Hafdic* (Scandinavian for ‘sea bank’) can be used to demonstrate an early origin for attempts to defend settlements on the Outmarsh and the Low Grounds from inundation by the highest tides.<sup>38</sup> Furthermore, by looking for and utilising such name elements alongside mapping and Lidar, we can start to plan out the locations of early sea banks and so determine where former coastlines are likely to be. As can be seen in the following discussions of the Ingoldmells/Addlethorpe, Grainthorpe and Wrangle areas, for instance, such local names suggest sometimes radically different coastlines to those we are now familiar with, involving medieval sea banks running inland perpendicular to the current coast or suggesting the need for defences from marine flooding from what we would now consider to be ‘inland’ as well as from the direction of the sea.<sup>39</sup> Finally, names like Schalflet Common (Burgh Common), more than 6 kilometres inland from the current coast at Skegness, suggest the presence there of major marine inlets in the relatively recent past, something confirmed by Lidar, documents, mapping and geological data.

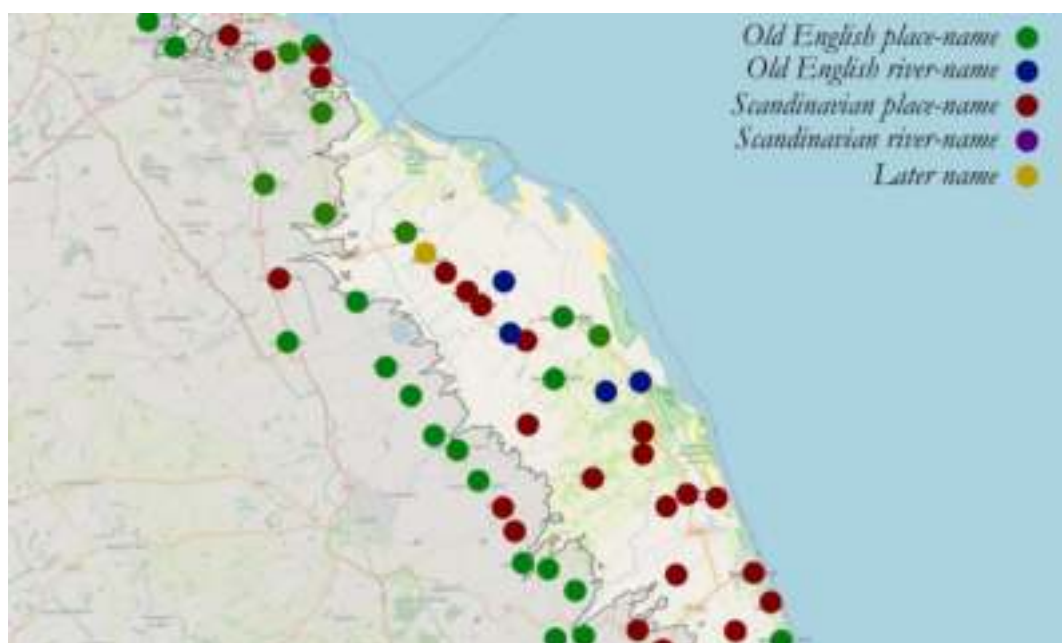


Figure 5: Significant place-names in the northern Lincolnshire Marsh categorised by their language and meaning, with the 3m contour inland of the Outmarsh (*i.e.* the Middle Marsh) shown. Note, many of the settlement-names on the eastern edge of the Middle Marsh have Old English origins, whilst those on the Outmarsh itself frequently have Scandinavian roots or, if they have an Old English etymology, represent Old English river-names reused as settlement names or names related to boundaries (Mar Haven)/seasonal salt-making sites (North Cotes and the two Somercotes), the only real exception here being Sutton-on-Sea (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

## Archaeological evidence

Archaeological evidence is equally important. For this project, a complete survey was made of archaeological data based on the readily available sources, with this material then being combined together and used alongside

<sup>37</sup> A. Owen and R. Coates, ‘*Traiectus*/*Tric*/Skegness: a Domesday name explained’, *Lincolnshire History and Archaeology* 38 (2003), 42–4.

<sup>38</sup> Owen, ‘*Hafdic*’.

<sup>39</sup> For Wrangle/Old Leake, see Hallam, *Settlement and Society*, p. 73, and now Simmons, *Fen and Sea*; see further Section 2 below for discussions of these and the other areas mentioned.

other sources of information to create local maps and analyse land-use changes over time. The data sources used include the following:

- The most readily accessible data comes from the Lincolnshire Historic Environment Record (HER), which includes summaries of much of the archaeological data from the region, especially that deriving from excavations. This information was primarily accessed via the new *Lincolnshire Heritage Explorer* website,<sup>40</sup> which maps the data so that relevant records can be easily retrieved. Each data point was examined and re-mapped onto the project's main maps (see below), being coded for both date and find/site-type. For excavations and reports that were of particular interest, a request was made for the original grey literature (unpublished) reports from the HER. This material is, needless to say, of considerable importance. For example, reports of Romano-British sites at Saltfleetby, South Cockerington and Scupholme buried under significant layers of marine alluvium demonstrate the continued flooding of the coastal marshes into the early medieval period, whilst also suggesting that the Outmarsh was dry enough for permanent and relatively high-status settlement in some areas during the Roman era.<sup>41</sup> Similarly, records of medieval ridge-and-furrow and settlement sites point to the increasing settlement and arable use of the Outmarsh in the medieval era, indicating that by this point it had ceased, in some areas at least, to be at risk of major marine flooding.<sup>42</sup> Finally, the grey literature held by the HER includes evidence that would otherwise not be mapped, including a large number of Iron Age/Romano-British salterns from the area between Burgh, Orby and Ingoldmells and finds of small amounts of Mid–Late Saxon pottery.<sup>43</sup>
- Additional archaeological evidence was sourced from the Portable Antiquities Scheme (PAS), which over the past 25 years has been the primary repository of 'casual' finds made by the general public, especially via metal-detecting, taking over this role from the Sites and Monuments Records/HERs. Not being constrained to sites subject to modern construction and excavation, this has been extremely useful in helping understand the extent and location of early activity all across the study area. It can, for example, help show that there was significant early settlement activity in the region from Skidbrooke to Theddlethorpe, especially on and around major former creeks (roddons), including important evidence for a knowledge of runes and pagan Scandinavian mythology amongst those living here; that some of the 'islands' of glacial till in the midst of the Outmarsh saw activity from at least the Middle Saxon era (c. 650–850 AD), as at Chapel St Leonards and Fishtoft; and that medieval activity was spread over a much wider area than might otherwise be thought.
- Academic reports and projects also add to the picture. The Humber Wetlands Project, for example, includes important excavation reports on a Romano-British high-status site at Marshchapel and a Late Saxon saltern in the same parish, along with evidence for medieval saltern mounds well inland of the current coastline in Tetney parish, whilst Helen Fenwick's doctoral thesis on the Outmarsh that derives in part from her work on the latter project provides a detailed and valuable overview of the archaeological resources of this area and their distribution/significance.<sup>44</sup> The excavated Late Saxon saltern is particularly interesting, as it lies inland of the medieval 'Sea Dyke' and so must both predate it and provide an earliest possible date for its completion as a coherent unit. Similarly, the analysis of Anglo-Saxon sculptural fragments as part of *The Corpus of Anglo-Saxon Stone Sculpture* confirms the impression derived from place-names and other archaeological evidence that permanent settlement must have already begun by the later tenth or early eleventh centuries in the northern Outmarsh at

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<sup>40</sup> Lincolnshire County Council, *Lincolnshire Heritage Explorer*, <https://heritage-explorer.lincolnshire.gov.uk/> (accessed 2021–2).

<sup>41</sup> See, for example, Lincolnshire HER records MLI88125, MLI89352, and MLI41294, along with the associated grey literature reports.

<sup>42</sup> See, for example, the possible Late Saxon farmsteads encountered at Theddlethorpe (MLI80963) and the extensive areas of ridge-and-furrow recorded all over this region.

<sup>43</sup> For example, Lindsey Archaeological Services, *Burgh-le-Marsh – Ingoldmells Rising Main: Archaeological Watching Brief* (1995); Pre-Construct Archaeology, *Archaeological fieldwalking and Field Survey Report: Site of Proposed Wind Farm, Orby Marsh, Lincolnshire* (2003).

<sup>44</sup> Ellis *et al* (eds.), *Wetland Heritage of the Lincolnshire Marsh*, pp. 128–9, 132–58; Fenwick, *The Lincolnshire Marsh*.

Conisholme and Theddlethorpe, as well as on some of the island sites like Cumberworth.<sup>45</sup> Likewise, the Fenland Project results from the northern Fenland are of considerable use, especially in the area around Wrangle, where finds of Late Saxon material add considerably to the picture offered by geographical and documentary analysis, as well as helping date the start of the medieval saltern industry that has left considerable traces in this area.<sup>46</sup> Finally, the surveys of prehistoric and Romano-British salt-making evidence from Lincolnshire Marsh undertaken by Tom Lane and Betty Kirkham have proven extremely useful, supplementing the records held by the HER and the Humber Wetlands Project.<sup>47</sup>

- Other online data sets, such as the CITiZAN database, the Defence of Britain Project, and the Rapid Coastal Zone Assessment. These offer a variety of material that supplements and expands upon the evidence held in the HER. The CITiZAN project, for example, includes a significant number of records of shipwreck sites, submerged forest exposures, and coastal chance finds, some of which are derived from the HER but others of which are the result of CITiZAN project activity and its users. Equally, the Defence of Britain project is particularly useful when considering the fortification of Lincolnshire's long, vulnerable coast in the twentieth century (the 'coastal crust'), with Matt Aldred's online viewer for Steve Thompson's *Extended Defence of Britain Database* proving especially valuable when it comes to analysing this material for the thematic section, as it categorises sites by their different types.<sup>48</sup>

## Lidar, aerial imagery and mapping data

Finally, Lidar, aerial imagery and mapping data offer perhaps the most important sources for the present project. In particular, Lidar mapping of the extremely low-lying plain between the Middle Marsh and the sea provides the baseline landscape against which the historical landscape can be evaluated. Key sources are as follows:

- Lidar models of the low-lying terrain of the Outmarsh and Low Grounds/Tofts. Lidar, or airborne laser scanning (ALS), a form of active remote sensing, produces detailed and reliable topographic maps that have a high degree of accuracy, allowing us to observe extremely minor variations in the height of the land. Previous work on the Environment Agency's Lidar data—available under an Open Government licence—by Steve Malone has highlighted just how valuable this data source is for the coastal wetlands and fenlands of Lincolnshire.<sup>49</sup> In particular, because it is capable of showing extremely small variations in ground level (its vertical accuracy is quoted as +/-15cm, but Malone notes that its relative accuracy point-to-point is higher at 5–7 cm), Lidar enables features barely visible on the ground to be perceived in the final renderings. The surface and terrain models that can consequently be created show significant traces of the creeks, banks and other features that once existed all across the Lincolnshire Marshes. Malone's models, available on his website and deposited in part with the Lincolnshire HER, show this well, but by using a single scale of heights they are limited in terms of fully tracing these creeks. For the purposes of this project, therefore, the Environment Agency's Lidar data was processed using a GIS package (QGIS) and then examined in detail for the entire study area, with colour ramps, maximum and minimum height levels, and hillshade adjusted as needed to bring out the course of the traced features. By combining the physical features thus revealed with historical, archaeological, geological and linguistic data, we can make significant headway into understanding the

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<sup>45</sup> P. Everson, and D. Stocker, *Corpus of Anglo-Saxon Stone Sculpture V: Lincolnshire* (Oxford, 1999), Conisholme 01, Cumberworth 01, Theddlethorpe St Helen 01.

<sup>46</sup> Lane, *Fenland Project 8*.

<sup>47</sup> Lane, *Mineral from the Marshes*; B. Kirkham, 'Iron Age and Roman saltmaking on the Lindsey coast and marshland', in T. Lane and E. L. Morris (eds.), *A Millennium of Saltmaking: Prehistoric and Romano-British Salt Production in the Fenland* (Heckington, 2001), pp. 405–10, especially fig. 124 (p. 406).

<sup>48</sup> CITiZAN interactive coastal map, <https://citizan.org.uk/interactive-coastal-map/> (accessed 2021–2); Matt Aldred and Steve Thompson, *eDoB Online (ver 18.6)*, <https://edob.mattaldred.com/> (accessed 2022).

<sup>49</sup> S. Malone, 'Lincolnshire Fenland Lidar', HTL/APS Working Paper 1 (2014), [www.academia.edu/5807526](http://www.academia.edu/5807526); S. Malone, *South Lincolnshire Fenland Lidar*, APS Report 46/09 (June 2009); S. Malone, *Viking Link: Boygrift to North Ing Drove, Lincolnshire Onshore Cable Route – Air-Photographic and Lidar Assessment* (Nottingham, 2017); S. Malone, *Triton Knoll Electrical System: Historical Environmental Baseline: Appendix A, Anderby Creek - Bicker Fen onshore cabling, Lidar Assessment*, document ref 6.2.5.8.1 (2015); S. Malone, *Fenland Lidar*, website, <http://www.legioxx.org.uk/lidar/Fens/fenland-lidar.html> (accessed 2021–2).

baseline early medieval landscape of the Lincolnshire coastline and marshes (see further Section 2 below).

- The Fenland Survey mapping of roddons. A previous attempt to map out the wide, silt-filled former creeks of the Lincolnshire coastal zone was undertaken around Wrangle by the Fenland Survey.<sup>50</sup> This aimed to map these channels by aerial photographs and observation, and so forms a valuable companion to the data recovered from Lidar models, although the results do differ in parts and Lidar gives a considerably wider level of coverage than was previously possible.
- Aerial photography. Aerial photography can provide a valuable supplementary source for tracing the former wetland landscape of the Outmarsh and Low Grounds, confirming and extending the results available from an analysis of the Lidar data. The primary source for this used in this project was Google Earth, which makes the aerial photographic tiles available for reuse and has an archive of images taken under different weather and crop conditions extending back of a number of years. In addition, the Historic England *Aerial Photo Explorer* was also utilised, as were selected aerial photographs held by the Department of Geography at Cambridge University (Cambridge University Collection of Aerial Photography/CUCAP). Google Earth Pro also has the ability to capture ‘viewsheds’ from specific



Figure 6: Extract from Captain Andrew Armstrong's well-regarded *Map of Lincolnshire* (1779), showing the coast from Friskney to Chapel Point. Points of particular interest include the undrained East Fen with its lost lakes or deepes (probably flooded peat cuttings), the depiction of Burgh on a promontory of higher ground leading out into the Outmarsh, the portrayal of Skegness as a small hamlet with a 'Bathing House and Tavern' to its south, and the wide expanse of saltmarsh at Ingoldmells (Source: © The British Library Board, British Library Maps K.Top.19.19.5 tab.end).

<sup>50</sup> Lane, *Fenland Survey* 8, p. 72.

points, something that is also of potential use in terms of determining what points in the Marsh would be intervisible; this was used in the current project for the thematic analysis in order to establish whether claimed intervisible beacon sites really were so and to examine the areas of the coastal marshes overlooked by medieval castle sites.<sup>51</sup>

- The National Mapping Programme (NMP) and the Lincolnshire Historic Environment Record transcriptions of aerial photographs showing cropmarks and soilmarks of archaeological features. The NMP analysed large numbers of earlier aerial photographs of the Lincolnshire Outmarsh area in 1992–6 and the record of their results are deposited with the Lincolnshire HER and utilised from there in this project. Whilst channel features are generally not recorded by the NMP, cropmarks and soilmarks of archaeological features are, and these can be of considerable value for understanding the development of the Outmarsh, especially in areas that have seen recent development, for example showing zones of medieval activity and its character. For the Wash coastline area, which wasn't covered by the NMP, the HER holds a number of transcriptions and records of archaeological features observable from aerial photographs that are also of use.<sup>52</sup>
- Medieval to early nineteenth-century maps. Medieval maps of Lincolnshire are of limited use, but a handful of these do show some of the perceived key settlements along the coastline, which is of interest when considering the roll of towns and ports in the coastal landscape, whilst the fourteenth-century Gough Map also shows some roadways that were used in the medieval period.<sup>53</sup> Maps of Lincolnshire from the early modern period through to the early nineteenth century show progressively more detail, and local mapping from this era is also of considerable interest—such items have been discussed and in part collected in two Lincoln Record Society volumes.<sup>54</sup> Of particular interest to the present study have been Captain Armstrong's *Map of Lincolnshire* from the 1770s (fig. 6), which shows wide areas of saltmarsh along the coast and the earliest bathing inn at Skegness, as well as other interesting landscape features; seventeenth- and eighteenth-century maps based on the work of Ogilby and others that show pre-toll road routeways across Lincolnshire; and Bryant and Greenwood's large-scale maps of Lincolnshire from 1825–7 and 1830, which show more detail in some cases than do the contemporary Ordnance Survey maps. Early local maps that are particularly helpful include a manuscript plan of Wainfleet Haven from the 1560s, Hollar's 1661 *Map of the East and West Fenne*, Haiwarde's important 1595 map of Marshchapel and Fulstow showing the end of the salt-making industry there, and James Bradley's *Plan of the Low Lands* from 1818, which shows the former creeks in the reclaimed lands of Croft and Wainfleet.<sup>55</sup>
- Nineteenth- and twentieth-century maps. Particularly important maps include the original series of Ordnance Survey maps, both in draft and as published, which are available from, for example, the British Library and the *Vision of Britain* website. These show much valuable information about the coastline prior to the Victorian period, though for field boundaries we have to wait until the much more detailed Ordnance Survey mapping of the 1880s–1900s Six-Inch series. The latter are particularly important for showing field boundaries that are likely to preserve early features, prior to the removal of such boundaries across much of the region by subsequent agriculture. In particular, they show large blocks of 'long lands' or dales in the area from Marshchapel to Theddlethorpe, which are believed to

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<sup>51</sup> Cambridge University Collection of Aerial Photography (CUCAP): <https://www.cambridgeairphotos.com/>; Historic England, *Aerial Photo Explorer*: <https://historicengland.org.uk/images-books/archive/collections/aerial-photos/>; Google Earth Pro: <https://www.google.co.uk/earth/about/versions/>.

<sup>52</sup> This material was primarily accessed via Lincolnshire County Council's *Lincolnshire Heritage Explorer*, <https://heritage-explorer.lincolnshire.gov.uk/> (accessed 2021–2), with the underlying NMP transcriptions also being made available to me by the HER (SLI3613); see now also the Historic England *Aerial Archaeology Mapping Explorer*, at <https://historicengland.org.uk/research/results/aerial-archaeology-mapping-explorer/>.

<sup>53</sup> For a discussion of early maps showing these features, see C. Green, 'Some interesting early maps of Lincolnshire', blog post, 19 November 2015, <https://www.caitlingreen.org/2015/11/some-early-maps-of-lincolnshire.html>.

<sup>54</sup> R. A Carroll, *Printed Maps of Lincolnshire, 1576–1900: A Carto-Bibliography with an Appendix on Road-Books, 1675–1900* (Woodbridge, 1996); R. C. Wheeler, *Maps of the Witham Fens from the Thirteenth to the Nineteenth Century* (Woodbridge, 2008).

<sup>55</sup> Wheeler, *Witham Fens*, maps 3, 7, 120; G. R. Walshaw, 'An ancient Lincolnshire map', *The Lincolnshire Magazine* 2 (1934–6), 196–206.

have their origins in a medieval subdivision of common wetlands (fig. 3).<sup>56</sup> They also show a markedly sinuous pattern of field boundaries in the area between Hogsthorpe and Croft that accords extremely well with the channels and creeks visible on both Lidar and aerial photographs. A slightly earlier arrangement of field boundaries, which shows even more sinuous features, can be had from the local tithe maps where these exist. These and their associated Apportionment Schedules—with which the field numbers from the maps can be cross-referenced to determine the mid-nineteenth-century land-use, ownership and (sometimes) field-names—are most readily accessible via an online portal working in partnership with the National Archives, and the field patterns visible on these have been used in the local landscape studies where they are available. Of especial interest are those tithe maps where the individual fields are given names in the associated Apportionment Schedules, rather than simply plot numbers, as these can help considerably in reconstructing the coastal landscape.<sup>57</sup> Likewise, enclosure maps and reconstructions of the pre-enclosure landscape created by Eleanor and Rex C. Russell are available for some localities and can be helpful, though they are relatively rare in this region.<sup>58</sup>

## Conclusion

In the past, models of the landscape development of the region drawn from different disciplines have not always worked well together well—for example, an Iron Age/post-Roman marine transgression reaching up to 6.7m OD has been hypothesised by geologists and geographers along the inner edge of the Outmarsh, eroding and smoothing the land surface here.<sup>59</sup> However, this is out of accord with the available archaeological evidence, with Bronze Age barrows and similarly early finds all found in-situ below this level, as at Butterbump, Willoughby,<sup>60</sup> and the ‘smoothing’ was perhaps more plausibly created much earlier (at the end of the last glaciation?). The aim of the wide-ranging data collection and analysis undertaken by the current project is to try to provide a credible, interdisciplinary model of the landscape evolution of the Lincolnshire coastline that takes account of all of the available sources of evidence, based on both the primary sources and prior research. This can then be used to more fully examine and interrogate the landscape evolution of the Lincolnshire coastline and, ultimately, the place of inns and public houses within this, as is outlined in the following sections.

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<sup>56</sup> Gardiner, ‘Dales, long lands’.

<sup>57</sup> National Archive tithe maps and apportionments are available online via *The Genealogist* website, <https://www.thegenealogist.co.uk/tithe/> and <https://www.thegenealogist.co.uk/maps/>.

<sup>58</sup> See, for example, E. Russell and R. C. Russell, *Landscape Changes in South Humberside: the Enclosure of Thirty-seven Parishes* (Hull, 1982), at pp. 72–5 (Cleethorpes) and 95–8 (Grimby), and E. Russell and R. C. Russell, *Making New Landscapes in Lincolnshire: the Enclosure of Thirty-four Parishes* (Lincoln, 1983), at pp. 4–16 (Fulstow), 38–43 (Covenham St Mary and Covenham St Bartholomew), 72–4 (Marshchapel), 96–100 (Tetney) and 110–13 (Yarburgh).

<sup>59</sup> Davies and Van der Noort, ‘Lincolnshire coastal area’, p. 9; Simmons, ‘Creating dry land’, pp. 211–12.

<sup>60</sup> Lincolnshire HER MLI43597 – Butterbump Round Barrow Cemetery, Willoughby.

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## Mapping the Marsh: The Landscape Evolution of the Lincolnshire Coastline

## Introduction

Before we can begin to analyse the nature and evolution of the low-lying landscape that lies along the current Lincolnshire coastline from Boston up to Grimsby, we need to establish an accurate understanding of what this landscape actually looks like. Modern Ordnance Survey and British Geological Survey maps give at least a general idea of its character and they are usually the starting point for any discussion of the historical landscape evolution.<sup>61</sup> They show a wide, mainly flat plain of marine alluvium lying primarily around 1.5–2.5 metres above sea-level (*i.e.* Ordnance Datum or OD; this means that it lies significantly below the level of spring tides in this region, as noted in the first section), with, variously, dunes, saltmarsh and saltern mounds on its seaward edge, and the Middle Marsh and the extremely low-lying East Fen on its landward edge. On the Lincolnshire Marsh and, to a lesser extent, on the Wash coast, this landscape is studded by occasional low hillocks that usually reach up to between 3m and 9m above sea-level at their summits. These hillocks or minor rises primarily consist of glacial deposits, either till ('boulder clay') or gravel and sand, and they would originally have been low, dry islands in a wide coastal zone. Identifying just how many of these islands there were, and how extensive they actually would have been, is difficult, however, with even geological maps showing fewer than records of finds of such glacial deposits at the land surface would suggest.<sup>62</sup> Furthermore, current maps give no real indication of what was present in the rest of the Outmarsh and the Low Grounds of the Wash coast away from these islands prior to the 1500s. A key tool in aiding our understanding of both these questions is Lidar. Lidar, or airborne laser scanning (ALS), produces detailed and reliable topographic maps that have a high degree of accuracy, allowing us to observe extremely minor variations in the height of the land. Using this, we can see, for example, that the former islands in the area around Chapel St Leonards are more numerous and extensive than the BGS maps indicate and that they spread further too, down into the Addlethorpe area.<sup>63</sup> Even more importantly, the Lidar also shows that the former saltmarsh of the Outmarsh was criss-crossed by dense network of creeks and estuarine rivers, some potentially hundreds of metres wide or more.

## Approaches to reconstructing the creeks and rivers of the former coastal marshes

When this project was initially conceived, it was intended that it use the processed Lidar imagery from the Lincolnshire coastal zone produced by Steve Malone.<sup>64</sup> This processed data is based on the Environment

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<sup>61</sup> Most useful here are the printed geological maps, made available online by the British Geological Survey either as scans or an interactive viewer (<https://webapps.bgs.ac.uk/data/maps/>, see also <https://www.bgs.ac.uk/geological-data/map-viewers/>). Ordnance Survey maps with spot heights are available from the late nineteenth century onwards, with the modern 1:25,000 scale colour raster map (March 2022) having both 5 metre contours and spot heights, although as these are in whole metres, they are perhaps less useful than older maps with spot heights in feet when it comes to looking at small changes in elevation. For an attempt to characterise the modern and historic landscapes of the Lincolnshire coast based primarily on modern mapping, see J. Lord and A. MacIntosh, *The Historic Character of the County of Lincolnshire: The Historic Landscape Character Zones* (Lincoln, 2011), pp. 82–9, 92–7, 105–07.

<sup>62</sup> For example, the glacial till 'island' of Fishtoft, near Boston, is clearly present in borehole records and was cut through when the Hobhole Drain was dug in the first decade of the nineteenth century; it is also visible on Lidar, but it does not appear on the British Geological Survey map of this area; see further below, Section 2.6, and see also the distribution of glacial 'islands' in the Thoresthorpe–Hogsthorpe area identified in D. J. A. Evans, *et al*, 'A chronology for North Sea Lobe advance and recession on the Lincolnshire and Norfolk coasts during MIS 2 and 6', *Proceedings of the Geological Association* (2018), <https://doi.org/10.1016/j.pgeola.2018.10.004>, compared with the far smaller number identified on the published geological maps.

<sup>63</sup> Evans *et al*, 'A chronology', figs 2 and 5.

<sup>64</sup> S. Malone, 'Lincolnshire Fenland Lidar', HTL/APS Working Paper 1 (2014), [www.academia.edu/5807526](http://www.academia.edu/5807526); S. Malone, *South Lincolnshire Fenland Lidar*, APS Report 46/09 (June 2009); S. Malone, *Fenland Lidar*, website, <http://www.legioxx.org.uk/lidar/Fens/fenland-lidar.html> (accessed 2021–2).



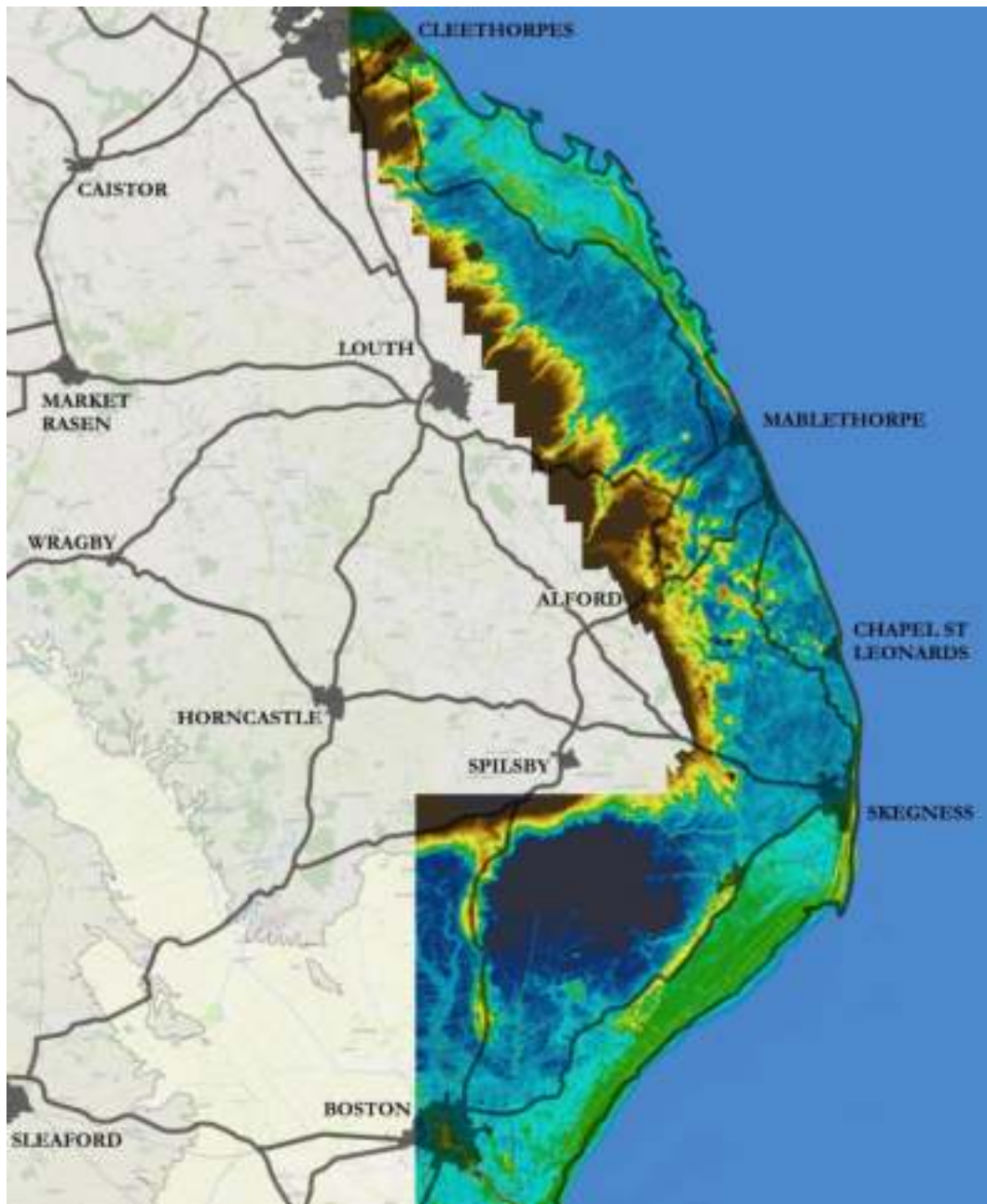


Figure 7: Lidar image of the entire study area from Boston to Grimsby using a standardised colour ramp similar to that of Malone, except for land below 0m OD (primarily the East Fen), which is rendered in black. The area shown in grey is land over 3m OD (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

Agency's Digital Surface Model (DSM) Lidar data set, which represents the unfiltered elevation data from aerial laser scanning of the land surface, with vegetation and buildings retained and not replaced by interpolated values from the surrounding surface area. The vertical accuracy of this data is generally quoted as +/-15cm, although the point-to-point accuracy is higher at 5-7cm. As such, it has the potential to pick up extremely small variations in ground elevation and so allow very indistinct archaeological and natural features to be discerned in the processed data.<sup>65</sup> Malone's final processed images, which are available either as tiles deposited with the Lincolnshire HER or an interactive online map, use a single, standardised, merging colour ramp across the Fenland and Marsh areas covered by this project, which was designed to produce the best definition of extinct creeks and channels in this area. So, the land that lies at or below 0m OD (such as that found in the East Fen and occasionally in parts of the Lincolnshire Marsh) has a white colour, whilst a dark blue colour is applied at

<sup>65</sup> Malone, 'Lincolnshire Fenland Lidar', p. 4.

1.5m OD, a light blue colour at 2.5m OD, a green colour at 3m OD, a yellow colour at 5m OD, and a brown colour at 10m OD. Such a colour ramp, with each colour gradually merging into the next, shows significant changes in colour between 1.5m OD and 3m OD, the height range of much of the Outmarsh and Fenland, as well as showing land that lies above the mean high-water mark of spring tides (c. 3–3.4m OD) in green and land above the 5m OD mark in yellow, a height that offers a good approximation to the edge of the Outmarsh.<sup>66</sup>

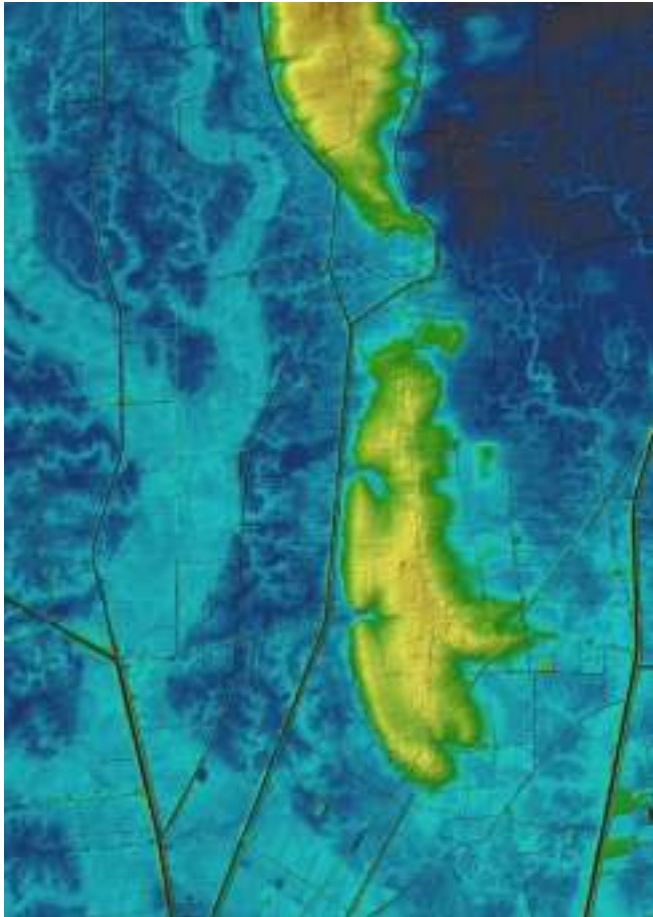


Figure 8: Detail of the creeks visible on Lidar to the west of Sibsey and Stickney, showing trunk, major and minor roddons branching in a dendritic manner, along with the darker area of the East Fen (top right).

The result of all this is that the processed Lidar images enable the tracing of the vanished creeks and estuarine rivers of the Lincolnshire Outmarsh and northern Fenland. Here they occur as slight changes in colour indicative of small but locally significant variations in height compared to the surrounding former marshes. These variations primarily represent raised ‘roddons’, that is silt- and sand-filled former channels that now stand higher than the surrounding land, due in part to the latter suffering from compaction and shrinking under drainage (especially in areas where there was formerly peat), although in some cases they also represent down-cut channels.<sup>67</sup> The way in which roddons form is not entirely clear, but it seems likely that tidal, salt-marsh creeks become choked with marine sediments over time, probably quite rapidly, leaving behind only a final down-cutting channel characterised by a relatively organic-rich fill that can appear dark in aerial photographs and which in some areas may be the only surviving trace of a former creek, if the roddon itself is too indistinct.<sup>68</sup> The resultant creeks and rivers can be seen to weave across the landscape on the

processed Lidar images and often have significant dendritic offshoots. They can, in general, be divided up into main, or ‘trunk’, channels, often 250m to 1km or more wide and usually connected with freshwater drainage from the surrounding higher land (as in the case of the proto-Witham in the Fenland and the roddons connecting to the Lud and Great Eau catchments in the Lincolnshire Marsh), and secondary/tertiary tributary channels—‘major’ and ‘minor’ roddons—which typically have blind endings indicative of saltmarsh drainage, especially when it comes to the smaller creeks, with their water and sediment being primarily sourced from the sea.<sup>69</sup>

<sup>66</sup> Note, the most extreme nineteenth- and twentieth-century storm surges recorded on the Lincolnshire coast reach up to around 5m OD, for example those recorded at Winthorpe in 1837—witnessed by a mark set 2.7m above ground level on the side of the church tower—and all along the Lincolnshire coast in 1953: F. A. Barnes and C. A. M. King, ‘The Lincolnshire coastline and the 1953 storm flood’, *Geography* 38.3 (1953), 141–60 at pp. 145, 146.

<sup>67</sup> On roddons, see, for example, M. P. Waller *et al*, *The Fenland Project Number 9: Flandrian Environmental Change in Fenland* (Cambridge, 1994); D. M. Smith *et al*, ‘Holocene drainage systems of the English Fenland: roddons and their environmental significance’, *Proceedings of the Geologists’ Association* 121 (2010), 256–69.

<sup>68</sup> S. Malone, *Triton Knoll Electrical System: Historical Environmental Baseline: Appendix A, Anderby Creek - Bicker Fen onshore cabling, Lidar Assessment*, document ref 6.2.5.8.1 (2015), p. 2; Smith *et al*, ‘Roddons’.

<sup>69</sup> Smith *et al*, ‘Roddons’, p. 261.

Despite the availability of the Lidar data, plotting these watercourses can be a complex task. Part of the issue is that even though the above colour-ramp was designed to bring out small variations in height between 1.5m and 3m OD, the pattern can still be indistinct. Furthermore, in some areas of the study zone—especially those where towns and caravan parks have grown up, as around Boston, Skegness and Mablethorpe—the use of the Environment Agency’s DSM dataset means that underlying patterns cannot easily be observed due to the density of modern buildings. In consequence, it was felt sensible to use the Lidar data directly for the *Land on the Edge* project, rather than rely on Steve Malone’s processed tiles. This decision has two significant advantages. The first is that both the DSM and DTM (Digital Terrain Model) Lidar datasets can be used where appropriate. Whilst the DSM Lidar dataset is certainly better for bringing out archaeological sites and topographical detail in open areas, as it doesn’t alter the point data by trying to remove buildings and trees and replace them with interpolated values, it makes it almost impossible to trace roddons and channels in built-up areas. In contrast, the processing involved in creating the DTM Lidar dataset resolves these issues, at least to some degree, and allows one to observe broad-scale underlying changes in the height of the land surface, which is helpful when tracing former major channels and banks. Second, by directly accessing the Lidar data and manipulating it in a GIS program, through the alteration of colour ramps and their maximum and minimum height ranges, along with the use of hillshade as appropriate, considerable additional detail can be brought out in the Lincolnshire Marsh region compared to the standardised ramps.<sup>70</sup> This is in part due to the fact that the standardised colour ramps were designed for the Fenland proper, where roddons tend to be both very large and stand in some cases over 3m OD. In contrast, in the Lincolnshire Marsh the roddons tend to be lower in height, falling wholly within the ‘blue’ standardised colour ranges,<sup>71</sup> and are, moreover, often only a little higher than the surrounding land. The latter issue may be in part attributable to the relative paucity of peat on the Marsh, which reduces the scope

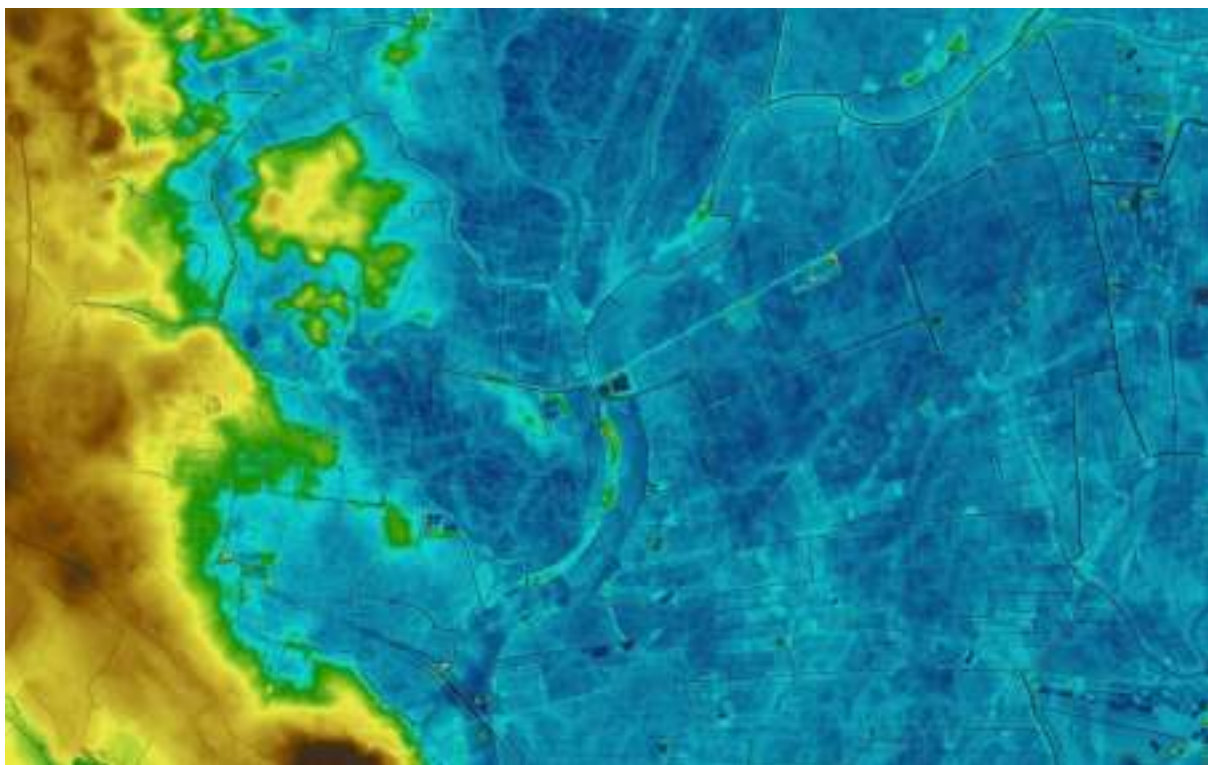


Figure 9: A Lidar image of the Lincolnshire Marsh to the east of Burgh-le-Marsh and Orby; note, the channels are clearly still here, but are noticeably harder to distinguish and trace than they are in the Fenland (fig. 8). This issue becomes even more acute further north, as in the area between Huttoft Bank and Chapel Point. Note, in this image one can see some of the down-cut ‘final channels’ mentioned above, and hillshading is not applied as it can actually act to slightly obscure channels in some circumstances.

<sup>70</sup> A point Malone himself notes when dealing with the Lincolnshire Marsh, observing that for these areas ‘customised colour ramps’ can be used ‘for additional clarity’: Malone, *Triton Knoll*, p. 6.

<sup>71</sup> Cf. Malone, *Triton Knoll*, p. 6.

for shrinkage/desiccation because of drainage of the land around the roddons—and thus a reduction in its elevation, highlighting the silted former channels in the landscape<sup>72</sup>—and so makes them harder to discern.

Because of the large number of such alterations to the colour ramps required in order to trace the roddons and down-cut channels of the Lincolnshire Marsh, particularly in those large areas of the Marsh where there is very little variation in heights even where roddons are present, it was deemed impossible to design a ramp that would accurately show the full extent of all of these trunk, major and minor channels across the study region. In consequence, a second decision was made to follow the model of the Fenland Survey and transcribe the various identified creeks and estuarine rivers onto a large-scale OS map via a layered drawing program and a graphics tablet (digitiser). The base map chosen for this purpose was the Ordnance Survey Six Inch map published in 1906–08, which was kindly made available for this project by the National Library of Scotland. This map has a number of advantages, namely that it was drawn at a very large scale; it lacks colour information which might interfere with the display of the transcribed Lidar data; it features parish and field boundaries as they existed prior to modern industrial agriculture; and it includes indications of earthworks that can then be matched with features visible on the Lidar plots.

This process of digital transcription onto a detailed map allowed the maximum flexibility in terms of manipulating the Lidar data whilst also producing human-readable and usable results that could be relatively easily related to the modern landscape. It also allowed the integration of data sources other than Lidar into the reconstruction of the former wetland landscape between Boston and Grimsby, permitting far more of the landscape of creeks and islands to be shown and easily analysed than might otherwise have been possible. In particular, aerial photography often adds considerably to the picture produced by the Lidar data, filling in gaps in this (especially where modern development obscures the pattern of creeks) or extending the plotted channels and showing smaller dendritic offshoots than the resolution of the Lidar is apparently capable of resolving. Such additions do, of course, depend on aerial photographs being taken in the right conditions and it is worth noting that such images, obtained from the sources described in Section 1, were most useful in the area between Chapel St Leonards and Skegness, though they made a contribution in all areas. The integration of the Lidar data with the Ordnance Survey mapping likewise helped elaborate the Lidar results, as field boundaries and parish boundaries can correlate well with the identified channels, preserving and extending their sinuous lines,<sup>73</sup> something particularly apparent in the southern part of the Lincolnshire Marsh, whilst archaeological work also occasionally offers both a confirmation and an elaboration of the pattern of former channels revealed by the Lidar data. The maps that result from this process of analysis, transcription and integration are presented below, starting with a case study of one area of the southern Outmarsh; in all of them, creeks and estuarine rivers are shown in dark blue, land below *c.* 2.5m OD in light blue, land between *c.* 2.5m and 3m OD in light green, land from *c.* 3m to 5m OD in green, and land over *c.* 5m OD in dark green.

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<sup>72</sup> The reason for this is not further investigated here, but it is worth noting that the Lincolnshire Marsh channels also tend to be significantly smaller and less-elevated than the major Fenland roddons.

<sup>73</sup> Cf. S. Stein *et al.*, 'New approaches to mapping and managing palaeochannel resources in the light of future environmental change: a case study from the Trent Valley, UK', *The Historic Environment: Policy & Practice* 8.2 (2017), 113–124 at pp. 115, 117–18 and Table 2 on the use of sinuous boundary features for mapping palaeochannels.

## Reconstructing the landscape: a case study of Schalflet in the southern Lincolnshire Marsh

A good illustration of how the various available sources can be used together to confirm and map the dense pattern of former creeks underlying the Lincolnshire Marsh comes from the area around Ashington in Orby Marsh. The standardised Lidar rendering suggests that there was a massive channel located here running initially south to north and then north-eastwards until it meets the sea between Chapel St Leonards and Addlethorpe, with medium-sized roddons branching off this and smaller, dendritic channels branching from those.<sup>74</sup> This pattern of dendritic creeks becomes significantly clearer if we manipulate the Lidar colour ramp and its bounds, with the final, down-cutting channels within the roddons also being clearly visible. Measurement of these features suggest that the major/trunk creek was around 250–300m wide, while the secondary ‘major’ roddons that branch from it are generally between 60 and 90m wide, with the minor branches off these being significantly smaller. An examination of the OS Six Inch mapping shows that the line of the major channel, including both ‘banks’, is preserved in both the early field boundaries and the sinuous course of the North Drain (in part an embanked final channel?), which meanders across it, whilst the secondary roddons are preserved in watercourses and field boundaries too. Earlier mapping by the OS and other cartographers indicate that the main channel continued south from Ashington and, as it passes through Burgh-le-Marsh parish, it continued to form a distinct and mappable landscape unit into the early nineteenth century known as Burgh Common—medieval documents term this ‘the common of Scalfete’ or ‘Burgh Scalflet’, a name probably meaning ‘the shallow estuary’ or similar.<sup>75</sup> A survey of the aerial photography from this area confirms the reality of this creek and the associated

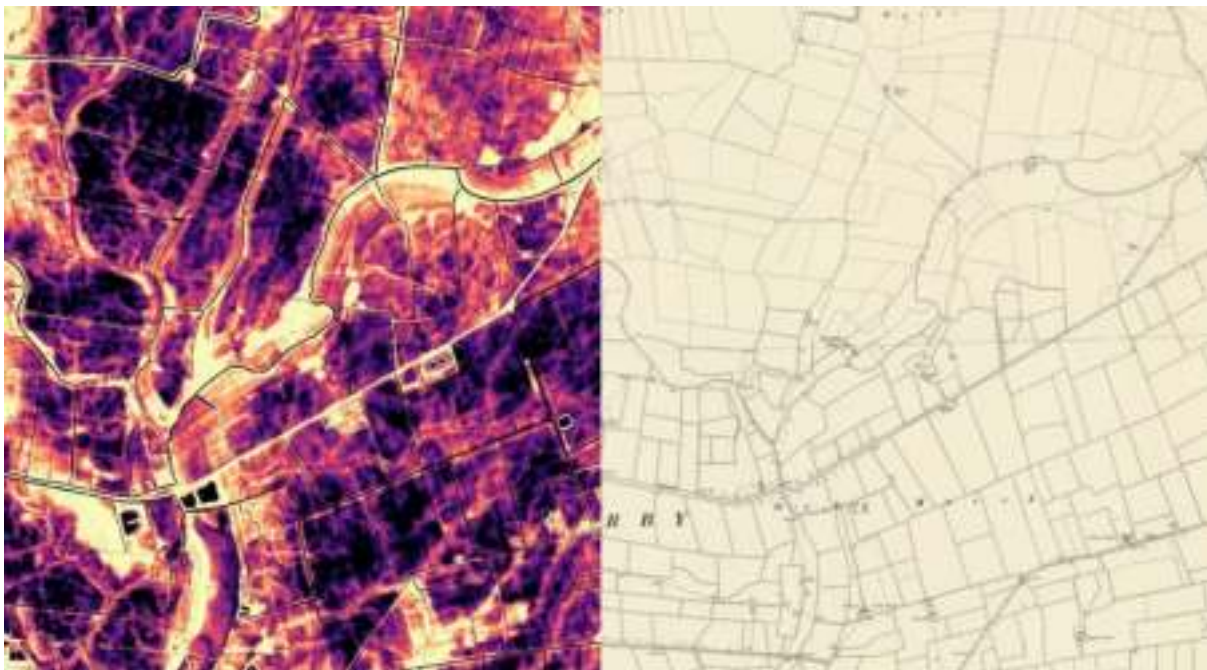


Figure 10: Orby Marsh around Ashington: (a) Lidar image using a modified colour ramp to bring out channel features; note further details can be retrieved by looking at even smaller areas and adjusting for the surface elevations there too. (b) OS Six Inch map of the area from 1907, showing the sinuous nineteenth-century field boundaries that preserve the line of a major creek and also of some of the major roddons to the north (Source: National Library of Scotland).

<sup>74</sup> This channel is noted also by Malone, *Triton Knoll*, figs. 10–11, p. 17 (feature 185), and J. Rackham, R.Scaife and C. Langdon, *Geoarchaeological Stage 4 Analysis: For the Triton Knoll Electrical Scheme*, Allen Archaeology and The Environmental Archaeology Consultancy Report Number AAL 2021012 (2020), p. 9 and figs. 6–7.

<sup>75</sup> Ordnance Survey, Map of the region around Louth, original series (1824). See, for example, I. Simmons, *Fen and Sea: The Landscapes of South-East Lincolnshire AD 500–1700* (Oxford 2022), pp. 79–80, 160; W. O. Massingberd, *Court Rolls of the Manor of Ingoldmells in the County of Lincoln* (London, 1902), pp. 44, 72, 73.



Figure 11: Aerial photo of the Ashington area, Orby, showing the major channel feature (darker area, outlined) and one of its tributary channels with a lighter roddon and a darker central feature (Source: Google Earth image from 2019, Google © 2022, Image © 2022 CNES / Airbus).

system of saltmarsh channels, whilst also adding some additional details, as does a magnetic gradiometer survey undertaken for Lark Energy by Archaeological Project Services in connection with proposed development on land of Habertoft Lane, which shows one of the major roddons and some of its offshoots in considerable detail.<sup>76</sup> Taken together, this all points to the presence of a significant system of palaeochannels in this area that may have continued to be active relatively late, given the preservation of at least some elements in the nineteenth-century field and parish boundaries.

Further research into this creek and its tributaries expands upon this. The geological evidence from this area confirms the impression of a major channel having operated here, perhaps for some very considerable period of time. Whilst the early Mesolithic land-surface that lies under layers of later marine sediments—deposited by rising sea-levels since the end of the last Ice Age—tends to be situated between 0 and 3 metres below present-day sea level on either side of the major channel, the handful of boreholes that intersect with this trunk channel suggest that its base lies significantly lower than this. In one, which reached down to around -5.1m OD, no base glacial deposits were encountered, only channel infill deposits. In another, deeper boring from within the channel at Burgh Common, the glacial till was encountered only at around -11.9m OD, where it was overlain with marine sand according to Swinnerton.<sup>77</sup> The implication is that this trunk channel has the potential to be a very ancient landscape feature indeed, with at least elements of it having their origins far back in the prehistoric era, very probably—given its extreme depth—in the Mesolithic era or before, based on the reconstructed sea-level curve for the Lincolnshire Marsh.<sup>78</sup>

Additional confirmation of the antiquity of this channel and its tributaries may be had from the archaeological data from the vicinity of Ashington. Iron Age and/or Romano-British salterns, which tend to lie buried under around a metre of later marine sediments, thought to have been deposited primarily in the very Late Roman or early medieval centuries,<sup>79</sup> correlate well with the channels observable from Lidar and aerial photography,

<sup>76</sup> J. Smith, *Land at Habertoft Lane, Habertoft, Lincolnshire: Geophysical Survey*, APS report no. 80/15 (2015).

<sup>77</sup> Rackham *et al*, *Triton Knoll*, fig. 7 (15/06 and 15/11); British Geological Survey borehole record from Burgh Common, BGS ID 508124.

<sup>78</sup> See I. Shennan *et al*, 'Holocene isostasy and relative sea-level changes on the east coast of England', in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 276–98 at p. 283 for a reconstruction of historical sea-levels along the Lincolnshire Marsh.

<sup>79</sup> See, for example, A. Crowson, *et al* (eds.), *Anglo-Saxon Settlement on the Siltland of Eastern England* (Heckington, 2005), p. 10, and Waller *et al*, *Fenland Project 9*, pp. 292–5, for the timing of the final major marine inundations along the Lincolnshire coastline, something confirmed by radiocarbon dating from a contact between a peat deposit and the overlying silts at Swineshead.

suggesting that these salt-workings inhabited a similar landscape to that which existed after they were buried by subsequent flooding. Early medieval and medieval archaeological material likewise demonstrates interesting links with this channel. The noticeable areas of higher ground found along the channel edges (see figs 9 and 10) have recently been identified as being ‘almost certainly’ medieval saltern mounds, built up from the waste products of the medieval sea-salt industry, something that would obviously suggest that this was an active marine channel at some point during the medieval period. In the absence of extensive excavations of these mounds, their exact chronology must remain uncertain, but a dating of them and their associated coastal salt industry to the ‘Anglo-Scandinavian’ or ‘Late Saxon’ era is supported by unusual finds of a ‘Norse’ bell of 900–1100 and a cut halfpenny of Æthelred II, dating to the 990s, from their immediate vicinity.<sup>80</sup>

The cropmarks and remains of the deserted medieval village (DMV) of Ashington/Ashingdon or Hassaken,<sup>81</sup> which sits astride the trunk channel and to the east of its junction with two of its major tributaries, are also of considerable interest and may offer some sort of potential end-date for significant marine activity in this area. Based on the pottery found at the site, Ashington probably had its origins in the twelfth to early thirteenth-century, with most finds dating from the thirteenth to fifteenth centuries.<sup>82</sup> The cropmarks encountered at this site suggest some sort of water-management taking place in order to allow for cultivation,<sup>83</sup> whilst the medieval house-sites that have been identified here sit on the edges of the trunk channel rather than atop it, which is potentially noteworthy. Taken together, the archaeological evidence would thus seem to suggest that the channel was active and perhaps starting to be used for salt-making into the later early medieval period (the ‘Anglo-Scandinavian’ or ‘Late Saxon’ era) but was sufficiently controlled to allow Ashington to be established across it by the later twelfth/early thirteenth centuries. Documentary evidence offers some further relevant hints. That there was still a potential marine component in the channel here even into the later medieval period may be suggested by repeated references in the Court Rolls of the Manor of Ingoldmells (which covered this area) to not just the ‘common of Scalflete’, but also the existence of defences between Scalflete/Schalflet and the marsh, which were deliberately cut and caused flooding and inundation of the surrounding marsh in 1315, something



Figure 12: Aerial photo of the Ashington to Sloothby area depicting a major roddon, 60m or more wide, that drained into the Schalflet and its tributaries, with a darker, central ‘final channel’ clearly visible (Source: Google Earth image from 2021, Google © 2022, Image © 2022 CNES / Airbus).

<sup>80</sup> Rackham *et al*, *Triton Knoll*, p. 9; Portable Antiquities Scheme, LIN-4509A8 and LIN-8887C3.

<sup>81</sup> See A. Owen (ed.), *The Medieval Lindsey Marsh: Select Documents* (Woodbridge 1996), p. 5, for an early documentary reference to Ashington, dated 1345, which spells the name *Hassaken*, and Lincolnshire HER MLI88788, which notes another medieval spelling of *Ashingdon*.

<sup>82</sup> J. Rylett, *Archaeological Fieldwalking and Field Survey Report: Site of Proposed Wind Farm, Orby Marsh, Lincolnshire* (Pre-Construct Archaeology, 2003), p. 18; G. Tann, *Proposed Wind Farm, Orby Marsh, Orby Lincs.: Revised Archaeological Assessment* (Pre-Construct Archaeology, 2009), pp. 8–9.

<sup>83</sup> Rylett, *Orby Marsh*, p. 7; these are visible on some of the aerial photos in the Google Earth collection.

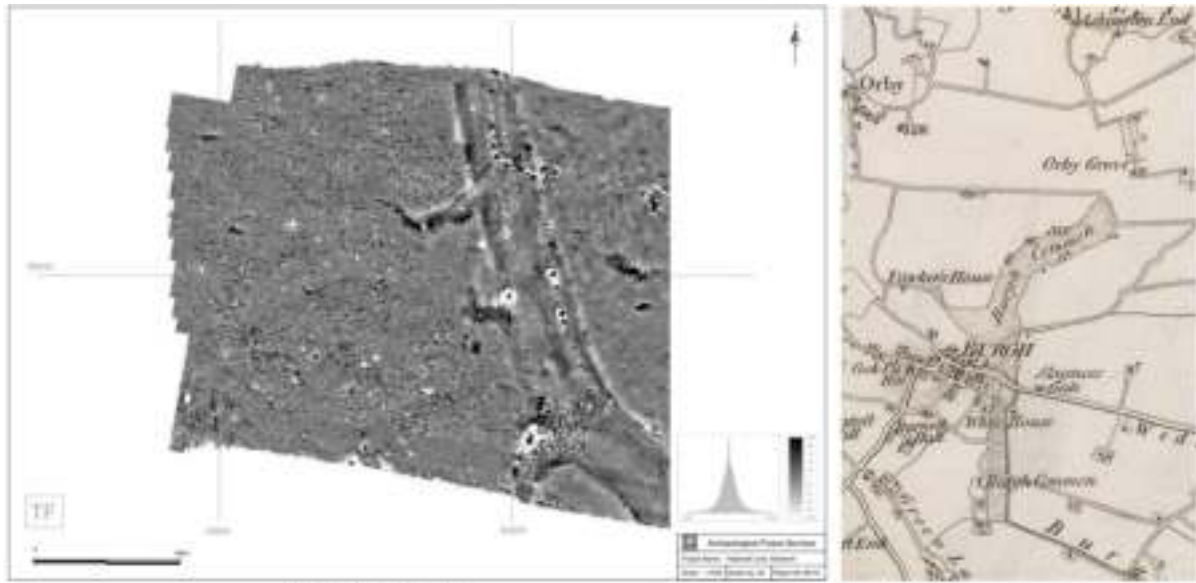


Figure 13: (a) Processed greyscale plot of a magnetic gradiometer survey undertaken by Archaeological Project Services, which shows the southernmost part of the major roddon seen in fig. 12, helping confirm its scale and reality (Source: Archaeological Project Services). (b) Section from the 1824 OS old series map, showing the extensive Burgh Common/‘Common of Scafllete’ that continued the line of the trunk channel south from Orby parish (Source: Ordnance Survey, 1824/[Wikimedia Commons](#)).

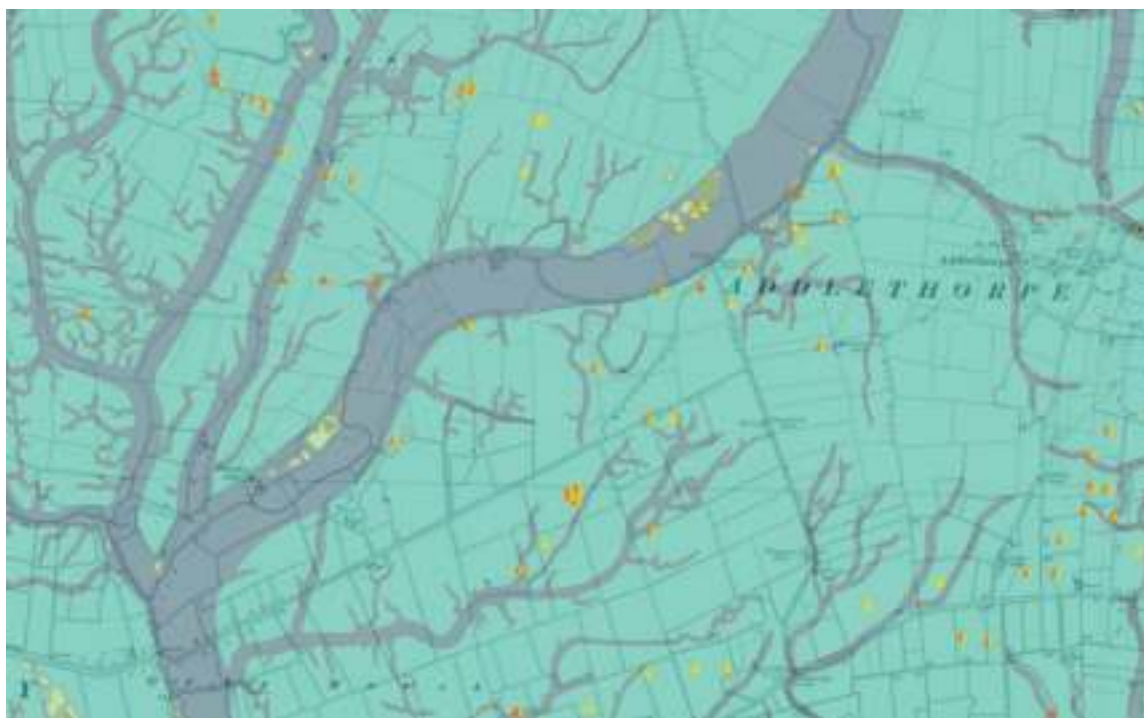


Figure 14: The transcribed channels visible in the Ashington to Addlethorpe area, showing the distribution of Iron Age (orange), Romano-British (yellow) and IA/RB (orange and yellow) saltern debris/mounds against these, based on all reported finds recorded by Tom Lane and Betty Kirkham, the Lincolnshire HER, and ‘grey literature’ archaeological reports consulted for this project. Note, the areas of higher ground on the main channel edge look to be medieval saltern mounds; evidence from the Ashington area (lower left) suggests that palaeochannels may have run on both sides of these mounds at some point, although the main channel was to the south both here and by the second group further east—as such, the main channel is shown around the mounds here, though finds of Romano-British salterns on the southern edge of the later mounds might suggest that its edge lay there in the pre-medieval era.

that is left unexplained but might represent a medieval variant of early modern attempts to prevent drainage schemes dewatering the wetlands of the Fens.<sup>84</sup> Similarly, in 1433–4, it is recorded that *Scafllete* in Burgh returned no rents from pasturing animals because it was ‘laid waste by the flow and ebb of the sea’, which indicates that

<sup>84</sup> Massingberd, *Court Rolls*, pp. 43–6, all dated 1315.



this area—located more than 6km inland from the known late medieval coastline—was at risk of marine inundation even so late as this.<sup>85</sup>

Other medieval documents that relate to Orby show that the name Schalflet occurs in that parish’s marshland in the fourteenth century as well as in Burgh and Croft parishes to the south,<sup>86</sup> something that arguably points to the whole trunk channel having once been known by this name. In this light, it needs to be recognised that the point at which this channel joins the present-day coastline between Addlethorpe, Ingoldmells and Chapel St Leonards likewise seems to have borne the name Schalflet in the medieval period. Certainly, Roger of Howden, writing in the later twelfth century, records the existence of a harbourage on the Lindsey coast called ‘the port of Schalflet’ (*portus de Schalflet*) to the north of Skegness, which must surely be identified with this channel and which moreover indicates that the mouth of the channel was sufficiently open then to accept shipping.<sup>87</sup> Further examination of the area where the Schalflet met the sea is, indeed, instructive. The southern bank of the channel, here up to *c.* 500m wide, is represented on early OS maps as Dudic Bank or similar, a feature that is also visible on the Lidar data, and which appears to be mentioned in the Manor Court Rolls for 1292 as having been cut by night by Master Henry Peticlerk ‘to the prejudice of the earl and the country’.<sup>88</sup> The word *dic* or ‘dyke’ was used locally in the medieval period for sea-defences and banks,<sup>89</sup> and Dudic Bank is clearly of considerable interest, as it is hard to consider it as anything other than a medieval sea-bank that was intended to run inland from the coast for some considerable distance (the surviving length of it stretches for around 1.7km) in order to constrain the mouth of a Schalflet that was then still an active marine channel.<sup>90</sup>

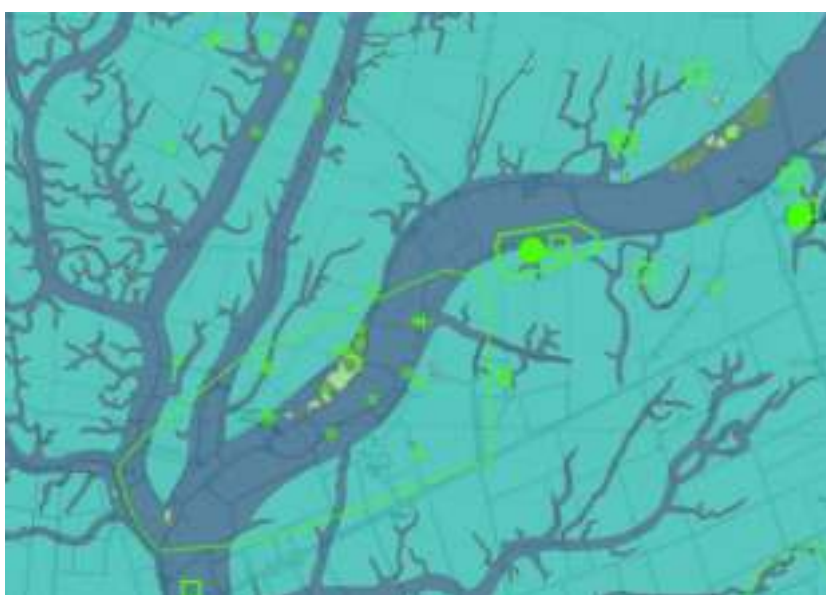


Figure 15: The distribution of late twelfth- to fifteenth-century finds in the area of the settlement of Ashington; the large area enclosed by a green line is the zone of cropmarks from this site, as mentioned in the text. Medieval pottery (stars) and metalwork (squares) is found from the medieval saltern mounds and near the channel, with a scatter of pottery on the top of the roddon. However, it is worth noting that actual house-sites (crosses) occur next to the channel and on its edge, rather than in its centre.

<sup>85</sup> Simmons, *Fen and Sea*, p. 160.

<sup>86</sup> Owen (ed.), *Medieval Lindsey Marsh*, pp. 99–102 at 100, 102. For Croft, see J. Thirsk, *English Peasant Farming: The Agrarian History of Lincolnshire from Tudor to Recent Times* (London 1957), p. 57, who notes that *Scalfleet* was one of the common pastures of Croft parish; as can be seen on the main maps of the region, the trunk channel continues southwards from Orby and Burgh parishes into Croft and finally Wainfleet parishes.

<sup>87</sup> P. Hughes, ‘Roger of Howden’s sailing directions for the English coast’, *Historical Research* 85 (2012), 576–96 at p. 589; P. G. Dalché, *Du Yorkshire à L’Inde: une Géographie Urbaine et Maritime de la fin du XIIe Siècle (Roger de Howden?)* (Genève, 2005), p. 175.

<sup>88</sup> Massingberd, *Court Rolls*, pp. 5–6, 7; it also recurs repeatedly as a surname in the court rolls for this manor.

<sup>89</sup> A. E. B. Owen, ‘*Hafdic*: a Lindsey name and its implications’, *Journal of the English Place-Name Society*, 7 (1974–5), 45–56.

<sup>90</sup> In this light, it is worth noting that the northern bank of the trunk channel is represented by the modern Trunch Lane, and Bryant’s 1828 *Map of Lincolnshire*, which is known to record details not preserved on contemporary OS and other maps, records a ‘Trunch Bank’ just to the north of this. This may well indicate that there was a sea-bank on the north of the channel too along the line of Trunch Lane, with an extension north from this, something supported by hints in the Lidar data, although no collection of early place-name data from Chapel St Leonards is currently available to try to trace this name back further, in contrast to Addlethorpe/Ingoldmells.



Figure 16: Extract of the OS 1824 original series map of the area showing Dudic Bank (Source: Ordnance Survey, 1824/[Wikimedia Commons](#)).

Looking in more detail at the mouth of the Schalflet, it is intriguing to observe that there seems to have been considerable interest amongst the parishes of this area in obtaining rights in and around this, with no less than five parishes laying claim to parts of the mouth of the former creek prior to the nineteenth-century reorganisation of the parish boundaries here, including a detached portion of the inland parish of Orby, a detached portion of Hogsthorpe parish, and a northwards extension of Ingoldmells parish to reach Dudic Bank where it joins the sea (fig. 17).<sup>91</sup> Needless to say, this, like the preservation of the course of the channel in nineteenth-century field boundaries, suggests that the channel may well have survived relatively late and was of considerable importance to the medieval economy. Also interesting is the fact that the Lidar clearly shows that, at a point probably during the later medieval period, the southern half of the mouth of the creek had ridge-and-furrow laid out over it and apparently a fresh bank constructed to the north of this new agricultural block.<sup>92</sup> This second bank, and perhaps the lack of a full reclamation of the mouth of the creek, could suggest that the channel remained at least

partially open to the sea at that point, as some of the hints in medieval documents relating to areas inland on the former Schalflet above might well indicate. Indeed, one possibility is that whatever remained of this former major channel can be identified with the unlocated Ingoldmells Haven, ‘otherwise called Theefes [Thieves] Creek’, whose infestation by pirates led to an armed expedition being sent against the creek from Hull in 1577 and a subsequent mass hanging in that town of the pirates captured then.<sup>93</sup>

In conclusion, by utilising custom colour ramps of the Lidar imagery and combining these with aerial photographs, geophysical surveys, geological data and early cartography, it seems to be possible to recover a significant proportion of the system of creeks and estuarine rivers that once flowed through this area of the Lincolnshire Marshes. Furthermore, by combining these sources together with the available archaeological evidence and surviving historical documents, we can start to establish the likely antiquity, longevity and history of these channels, and begin to understand how the inhabitants of the landscape interacted with them and altered them over time.

<sup>91</sup> That there was a detached portion of Hogsthorpe parish at the mouth of the former creek is indicated by the Ingoldmells tithe map of 1842 and Greenwood’s 1830 map of Lincolnshire, as well as contemporary documents (e.g. an advertisement for a house on Hogsthorpe Shore by the sea-bank, *Stamford Mercury*, 14 December 1827, p. 2).

<sup>92</sup> The ridge and furrow is Lincolnshire HER MLI88766 (Earthworks of medieval ridge and furrow at Addlethorpe). The bank is partially visible on Lidar and partially mapped on the OS Six Inch map; it is also present on Bryant’s *Map of Lincolnshire* (1828), and the western part of it, with a (later?) northerly extension is shown on the OS original series map of 1824 (see fig. 16). The sinuous character of this more northerly bank is interesting and is reminiscent of Huttoft Bank and other medieval banks, which Owen suggests results from them following the course of a creek: A. E. B. Owen, ‘Salt, sea banks and medieval settlement on the Lindsey coast’, in N. Field and A. White (eds.), *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 46–9 at p. 47, and see further below.

<sup>93</sup> J. Roche (ed.), *Acts of the Privy Council of England: New Series, Vol. X, A.D. 1577–1578* (London, 1895), pp. 18–19, 141; E. Gillett and K. A. MacMahon, *A History of Hull* (Hull, 1989), p. 156; S. Pawley, *Lincolnshire Coastal Villages and the Sea c. 1300–1600: Economy and Society* (University of Leicester PhD thesis, 1984), p. 61; D. Wynn, *Lincolnshire Villains, Rogues, Rascals and Reprobates* (Stroud, 2012), p. 52.

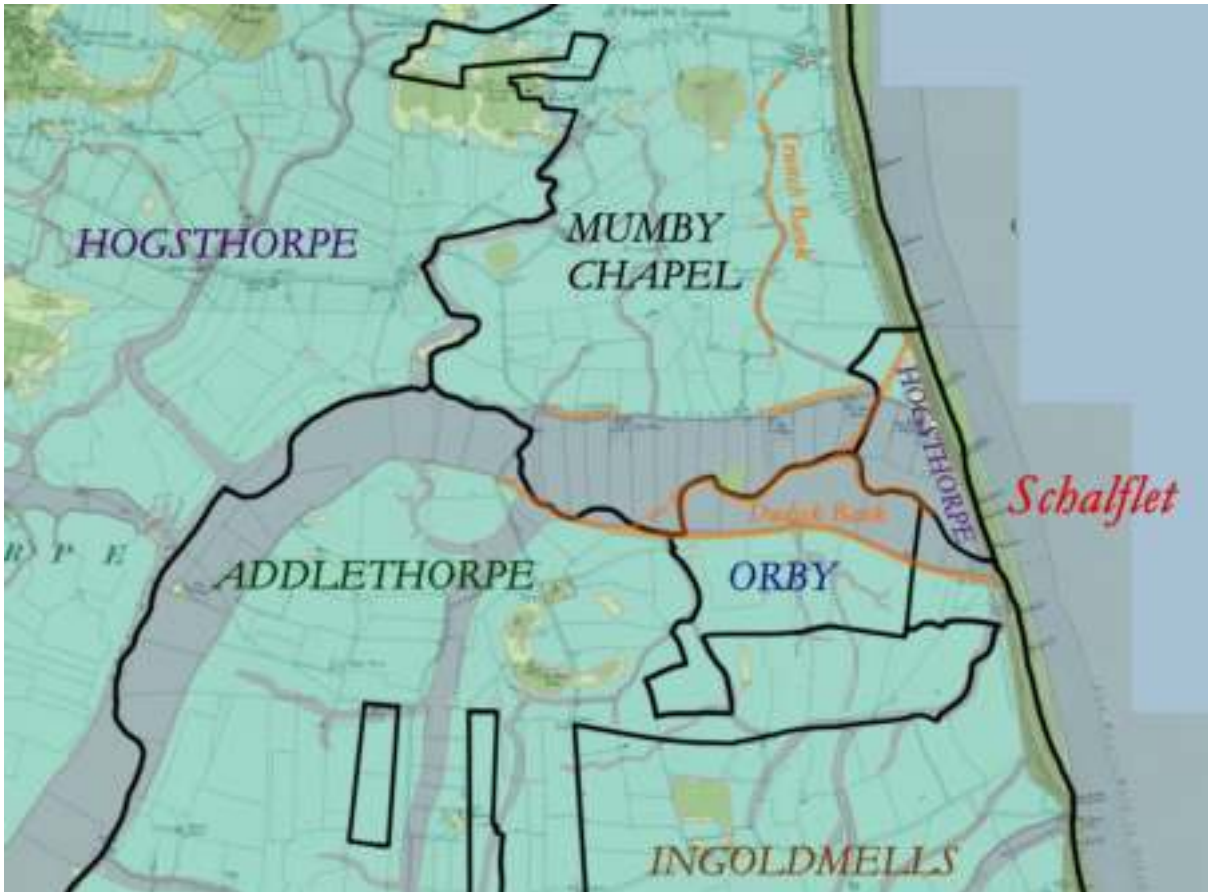


Figure 17: The mouth of the Schalflet creek, known in the twelfth century as the ‘port of Schalflet’. Key banks in this area visible on Lidar or recorded on early nineteenth-century mapping are shown in orange. As can be seen, the line of the creek not only forms part of the network of parish boundaries, but there seems to be considerable manipulation of boundaries here to ensure that five separate parishes have control of part of the creek’s mouth. The additional banks within the main creek are noteworthy and may suggest later attempts to control the sea here; in this context, it is worth noting that the mouth of the Schalflet may have been fully closed by the early seventeenth century, as a bank called ‘Hogsthorpe Jackfish Bank’ linking Bell Bank in Chapel (which must have been close to the Bell Bank Farm marked on the OS Six Inch map) with Ingoldmells Bank was ‘lacerated, ruined and torn’ by a ‘sudden breach of the sea’, with the lands behind flooded: Owen, ‘Coastal erosion’, p. 336.

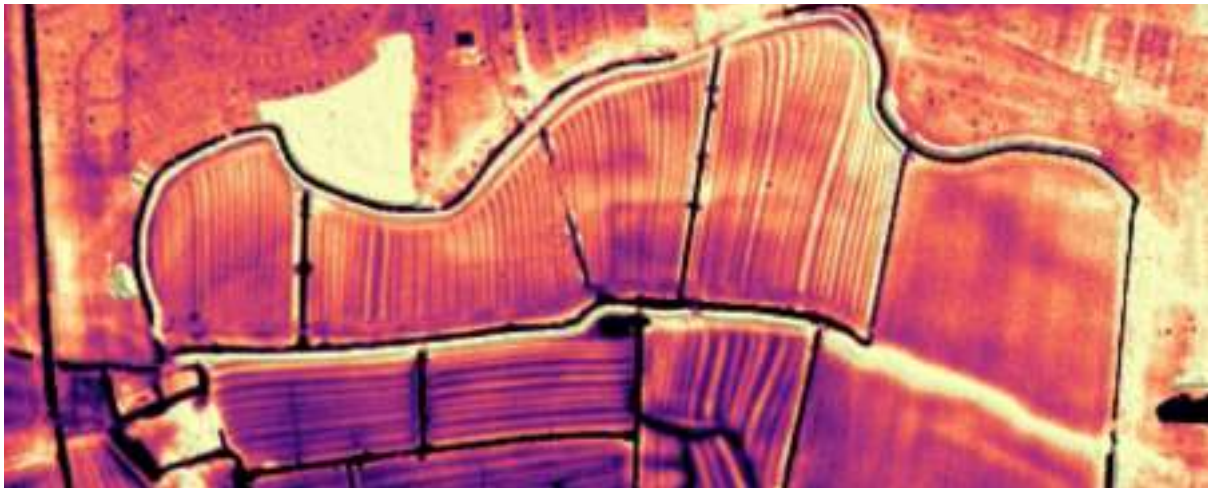


Figure 18: Lidar image of the area of reclaimed land in the mouth of the Schalflet, showing the clear ridge and furrow earthworks and the line of Dudic Bank running across the lower half of the image from left to right; the newer bank north of the ridge and furrow can also be seen in part—this bank is also shown on Bryant’s 1828 map of the area, as well as being partially mapped on the OS Six Inch and original series maps (although these map different elements of it).

# Mapping the pre-modern landscape of the Lincolnshire coastal zone

The following sections of this chapter bring together the results of the approach set out above to analysing the Lidar and other data relating to the pre-modern landscape of islands and creeks found along the entire coastal zone from Boston up to Grimsby. In line with the model established by Helen Fenwick in her earlier work on the landscape and history of the Lincolnshire Marsh, the landscape has been divided up into manageable blocks, starting in the southern Outmarsh—where our initial case study was located—and working northwards before returning to consider the slightly different area of Wash coastline between Boston to Wainfleet (see fig. 1). In part, this is due to practical considerations, as the size of total area covered is too large for the pattern of channels recovered to be shown in any detail in a printed form, whilst the shape of the Lindsey coastline would leave large areas of any images showing only sea. However, it also reflects the reality of the varying and dynamic landscape of the coast, with different parts of the Marsh and Wash coastlines showing distinct histories and trajectories in terms of the features revealed and how those are expressed in the modern-day landscape.<sup>94</sup>

## 1 The southern Lincolnshire Marsh from Wainfleet to Chapel St Leonards

This map-view covers the area from approximately Croft and Willoughby in the west across to Chapel St Leonards and Skegness in the east. Key points relating to the evidence from this map-view include the following.

- In terms of the Lidar coverage, the coastal strip in this map area from Skegness to Chapel St Leonards, is heavily built-up. As such, the Environment Agency's DTM Lidar dataset was of use, as above, although even with this it is hard to definitively trace all but the largest channels in this area without the use of additional sources, including historic aerial photography and sinuous parish and field boundaries preserved on nineteenth- and early twentieth-century mapping (the tithe maps and the OS Six Inch series). Nonetheless, it is clear that there some major channels running through this area, whose course and tributaries are able to be traced with a reasonable degree of confidence.
- Aerial photography from both historic collections and the Google Earth dataset proved especially useful, the latter in the coastal strip (countering the difficulty of using the Lidar data due to recent development) and the former in the area between the dry Middle Marsh and the coastal towns and villages. A significant proportion of the larger watercourses visible on Lidar could be correlated with large channels apparent on aerial photographs, although depending on the conditions and time of year the aerial photographs sometimes showed the full extent of the roddons and at other times only the final, darker, organic-rich, down-cut channel. Some aerial photographs were especially useful not only for both filling in the 'blank' areas of Lidar coverage and offering confirmation of the reality of these channels, but also for showing details of the 'tertiary' or 'minor' saltmarsh channels. These can be readily easily identified on the Lidar once the colour-ramps are suitable adjusted, but are often hard to disentangle from each other, due in part to their roddons being notable less-elevated than those of larger channels. Aerial photographs taken in good conditions were, however, able to resolve the patterns of these in several instances, as well as answer some of the queries about them that the Lidar raised.
- There was a good correlation of pre-twentieth-century field and parish boundaries with many of the

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<sup>94</sup> See further H. Fenwick, *The Lincolnshire Marsh: Landscape Evolution, Settlement Development and the Salt Industry* (University of Hull PhD Thesis, 2007).

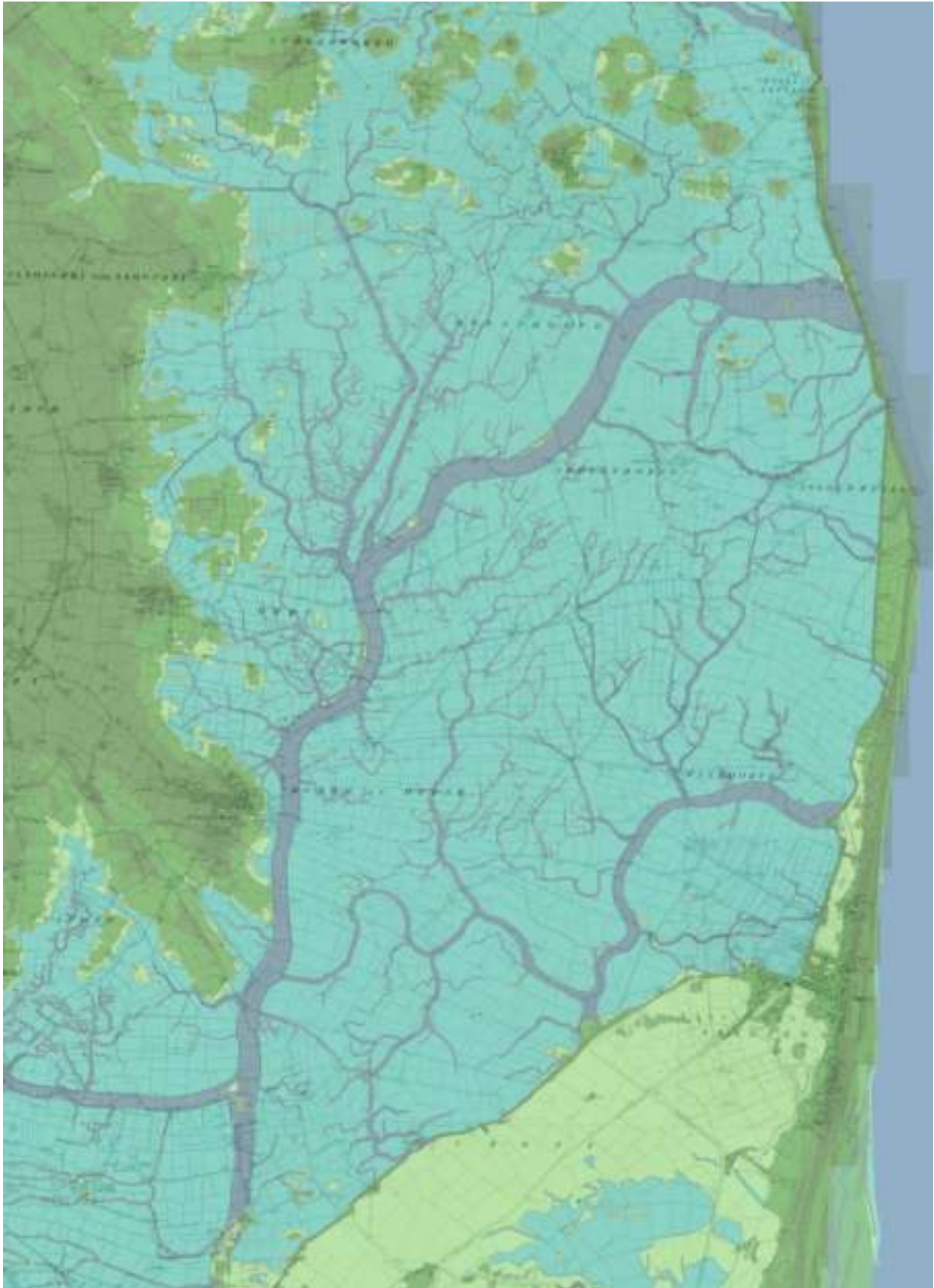


Figure 19: Reconstruction of the channel systems in place in the southern Lincolnshire Marsh, based on Lidar data, aerial photographs and other sources as set out in the main text. Note, on this map and all following maps, creeks and estuarine rivers are shown in dark blue, land below c. 2.5m OD in light blue, land between c. 2.5m and 3m OD in light green, land from c.3m to 5m OD in green, and land over c. 5m OD in dark green.

more significant channels. This stands in contrast to the situation found in other parts of the study region, for example around Grainthorpe and Saltfleetby, where medieval ‘long lands’ or ‘dales’ (long, thin strip fields up to a kilometre long but only 20–30m wide) were laid out over both roddons and the surrounding marshland probably beginning in the Anglo-Scandinavian era and stretching into the twelfth and thirteenth centuries and beyond.<sup>95</sup> The resulting field-boundaries offer a very regular appearance that often—though not always—shows little correlation with the identifiable network of saltmarsh channels here. In the Skegness area, however, the field boundaries tend to be often sinuous and not infrequently follow or even extend the lines of the identifiable creeks. This may reflect, in part, a different usage—both social and economic, perhaps—of the landscape here, but it may also reflect a situation whereby the major marshland channels remained active into the medieval period, as noted above in the case study of Schalflet.

If the evidence of Lidar, mapping and aerial photography thus worked well together to recover the pattern of saltmarsh creeks and estuarine rivers found in this area, what then does this pattern show? First, with regard to the date and nature of the visible system, it is worth noting that there is little evidence for overlapping systems of roddons of different dates, as is found in the Fenland proper (see the discussion of the Boston–Wainfleet area, below).<sup>96</sup> Instead, it looks very much like a single system of saltmarsh channels. This probably reflects the fact that current models of landscape development on the Outmarsh would suggest that a significant marine transgression occurred all along the Marsh coast in the Late Roman to Early Anglo-Saxon periods, burying Romano-British sites under a significant depth of marine sediments, but that the high tide level never overwhelmed inland areas from the Wash coast such as the East Fen, for example (perhaps being stopped by the significant depth of peat that once covered this area).<sup>97</sup> Certainly, the widely distributed industrial pre-medieval salt-making sites found in this map-view would support such a view, with salterns being



Figure 20: An example of the sort of aerial photographs available from the historic collections, in this case that of Cambridge University; the photograph shows both the main Schalflet creek and also significant details of the tributary channels in this region. Reproduced with permission of the Cambridge University Collection of Aerial Photography (c) Copyright reserved.

<sup>95</sup> M. Gardiner, ‘Dales, long lands, and the medieval division of land in eastern England’, *Agricultural History Review* 57 (2009), 1–14.

<sup>96</sup> See, for example, Smith *et al.*, ‘Roddons and their environmental significance’, and Malone, ‘Lincolnshire Fenland Lidar’, for illustrations of the overlapping roddon system found in the Fenland.

<sup>97</sup> See D. S. Brew *et al.*, ‘Holocene sedimentary evolution and palaeocoastlines of the Fenland embayment, eastern England’, in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 253–73 at fig. 27 for the extent of the ‘latest transgressive phase (renewed expansion of tidal flat areas)’ between 2,000 and 1,500 years BP (before present), which shows the East Fen remaining beyond the reach of the marine floods. For the Late Roman/early medieval marine transgression in Lincolnshire, see, for example, Crowson, *et al.* (eds.), *Anglo-Saxon Settlement on the Siltland*, p. 10, and Fenwick, *Lincolnshire Marsh*, pp. 140, 146, 198, 205, 239, 243, 251, 255, 263–5, 277–8; R Van der Noort, *The Humber Wetlands: The Archaeology of a Dynamic Landscape* (Bollington, 2004), pp. 127–9; D. N. Robinson, *The Book of the Lincolnshire Seaside* (Buckingham, 1981), pp. 13–14; T. W. Lane, *Mineral from the Marshes: Coastal Salt-Making in Lincolnshire* (Heckington 2018), pp. 51, 81.

generally situated on a Late Prehistoric and Romano-British saltmarsh land-surface that lay at around 0m OD or so and the waste mounds being nowadays buried under a metre or more of marine silts and clays.<sup>98</sup> Likewise, the excavated Romano-British land-surface with agricultural activity evidenced by plough marks at Hogsthorpe, which was located just below 1m OD and over 3km inland from the current coastline, was found buried under around a metre of marine silts.<sup>99</sup> As such, it is reasonable to consider the palaeocreek system as visible today to have dated from primarily the early medieval period, though as we saw in the previous section the network of channels may have remained active at least partway into the medieval period proper (the twelfth century onwards) and also continued a pattern of saltmarsh creeks that—in its major elements, at least—already existed in the Roman and prehistoric eras too.

Second, the widespread network of saltmarsh creeks and channels in this area looks to have seen drainage sometimes flowing in the opposite direction to the modern drainage network. For example, the Willoughby High



Figure 21: Map showing that the distribution of Iron Age/Romano-British salt-making sites in this area wasn't confined to the inland Schalflet area but extended to the modern coast (key as in fig. 14); parts of this area are now heavily developed and it is hard to trace channels here, but those that can be traced seem to show a relationship with the salterns.

Drain and its outfall at Chapel St Leonards was certainly in existence by the sixteenth century, when in 1569 seven townships were assessed for its repairs, and probably also in 1345, if Owen's interpretation of a contemporary supplement to a fourteenth-century scheme for rating the Marsh townships for sea defence—which he considers to denote responsibility for the upkeep of Willoughby High Drain and/or its outfall—is correct.<sup>100</sup> However, the evidence recovered from the Lidar data and other sources indicates that this was probably a (later?) medieval redirection of the waters of the Outmarsh here. The pattern of the channels in the northern half of the map-view instead implies that the waters now exiting into the sea through the Chapel St Leonards outfall had previously flowed not northwards and eastwards as now, but southwards and eastwards to join the Schalflet and so discharge into the sea further south between Addlethorpe and Chapel St Leonards. Thus, the waters of the Willoughby High Drain itself and the Sloothby High Lane

<sup>98</sup> Lane, *Mineral from the Marshes*, pp. 50–1, 81–2, 141–4, and plates 16 and 21. The deepest Late Prehistoric/Romano-British salterns were found by Betty Kirkham to have rested on a land surface 3m below the current one, as with Addlethorpe TF552687 (Lane, p. 141; Lincolnshire HER MLI41819), whilst those discovered by the Burgh-le-Marsh–Ingoldmells Rising Main were found to rest on a land-surface located at about 0m OD (Lane, pp. 50, 81; G. Tann, *Burgh-le-Marsh – Ingoldmells Rising Main: Archaeological Watching Brief*, Lindsey Archaeological Services, 1995).

<sup>99</sup> B. Kirkham, 'The excavation of a prehistoric saltern at Hogsthorpe, Lincolnshire', *Lincolnshire History and Archaeology* 16 (1981), 5–10.

<sup>100</sup> A. E. B. Owen, 'The upkeep of the Lindsey sea defences, 1550–1650', *Lincolnshire Historian* 2 (10) (1963), 23–30 at p. 25; Owen, *Medieval Lindsey Marsh*, pp. 4–5.

Drain as they flow from Willoughby, Sloothby and Cumberworth, look to have originally flown south along a long major roddon to join Schalflet by Ashington/Hassaken, rather than in the relatively straight, west–east channels they now occupy, and another, close-by major roddon likewise took the water than now flows north-eastwards along Wyche Drain southwards to the Schalflet too. Equally, the North Drain/Orby Drain, which sinuously runs in a now-embanked course across the top of the trunk channel of the Schalflet itself, is redirected about a mile before its mouth northwards to join the Willoughby High Drain and enter the sea just south of Chapel Point, something that might be either associated with the partial reclamation of its mouth for agriculture in the late medieval period or be undertaken at some point after this.

Third, it seems clear that there were two major trunk channels in this area, both of which join the sea not only on the Lincolnshire coast, but also on the Wash coast, and thus look like major saltmarsh and marine channels rather than estuarine rivers, as found elsewhere in the study area (although the waters of the surrounding higher ground did flow into them via their tributaries, as noted above). The largest of these was the Schalflet, already discussed, which ran through Wainfleet All Saints, Croft, Burgh-le-Marsh, Orby, Hogsthorpe, Addlethorpe/Ingoldmells and Mumby Chapel parishes prior to nineteenth-century parochial reorganisation and the creation of the parish of Chapel St Leonards. This seems to have originally had both a sea-mouth between Addlethorpe and Chapel, which may have remained at least partly open into the late medieval period and perhaps even into the later sixteenth century as we have seen, and another, southern mouth at Wainfleet Haven. As with the northern mouth, there seem to have been attempts to constrain the channel's waters close to its Wainfleet mouth by the construction of at least one sea-bank running along its edge like the Dudic Bank, as an early sixteenth-century document records the existence of a feature named *Grene Hadyke* in this location that seems to contain the early Lincolnshire term for a sea-bank, *Hafdic*.<sup>101</sup> This southern part of Schalflet seems to have ceased to function as a significant marine opening rather earlier than it perhaps did in the north, however, as the twelfth-century 'new town' of Wainfleet All Saints and its associated parish of Northholme/Wainfleet St Thomas were built partly atop a group of necessarily pre-mid-twelfth-century saltern mounds that filled and ultimately largely blocked the channel of the Schalflet for around a kilometre along its course from its mouth on Wainfleet Haven (partly visible in the bottom left of fig. 19, see further the Boston–Wainfleet section below).<sup>102</sup> It was presumably not long after the blocking of this southern mouth that the Schalflet significantly silted up at least as far north as Croft Manor, as this now-demolished major medieval moated manor house is built directly on top of the former creek—the archaeological evidence from this site consists of mainly fourteenth-century pottery and window glass, but a origin before this seems plausible and is perhaps evidenced in a document of 1240 mentioned below (fig. 22).<sup>103</sup>

Looking at the 'major' roddons and other channels that branch off from the Schalflet or flow into it, it is

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<sup>101</sup> 'Laws of the Little Lymn', f. 3v (Simmons, *Fen and Sea*, pp. 143, 155); Owen, 'Hafdic'.

<sup>102</sup> I. G. Simmons, 'Fen and sea: medieval and early modern landscape evolution in south-east Lincolnshire before 1700', *Landscapes* 18.1 (2017), 37–54 at p. 39; I. Simmons, 'The landscape development of the Tofts of south-east Lincolnshire 1100–1650', *Landscape History* 36 (2015) 9–24, at p. 10 and fig. 1; Simmons, *Fen and Sea*—see figures 1.4 and 2.1 for Simmons' reconstructions of the original location and scale of Wainfleet Haven, which was a wide tidal inlet located around and inland of the modern town, rather than significantly away from it as it is today. Simmons notes that the town is situated atop saltern mounds, something confirmed by the Lidar data and boreholes from this area, and observes that the earliest record of the town's existence dates from 1166 (*Fen and Sea*, pp. 18, 43 and fig. 2.3). Interestingly, the most northerly of these salterns seems to abut to the likely southern end of the *grene hadyke* sea-bank, which suggests the possibility of a common or linked origin for the two?

<sup>103</sup> Lincolnshire HER MLI41723 and MLI90833. The site of Croft moated manor is clearly visible on the Lidar data and aerial photographs and it was clearly a substantial site, probably the centre of the local manor court and bigger than most medieval moated manors, with good evidence for water management. On moated sites, see H. Fenwick, 'Medieval moated sites in the Humber lowlands of England – landscape transformation, utilisation and social emulation', *Medieval Archaeology* 56 (2012), 283–92, who notes that some of these had their origins in twelfth/thirteenth centuries, although others were founded in the fourteenth century.





Figure 22: Croft Manor on Lidar and the OS Six Inch mapping. This medieval moated manor, centre, whose ditches and mounds can be largely traced in outline on the Lidar, was located just to the south of where a major roddon (the ‘Old Lymn’/‘Little Lymn’) met the north–south trunk channel of the Schalflet, sitting right across the top the latter just below this meeting point. Note, the line of the ‘final channel’ of the Old Lymn, flowing across the south of its roddon, looks to have originally followed the line of flow of the Lymn roddon north-eastwards into the Schalflet prior to its redirection around Croft Manor; see further below (Map source: National Library of Scotland).

worth noting that some of these have a suspiciously straight character to elements of them, something that has previously also been commented upon by Steve Malone.<sup>104</sup> In particular, the two major roddons, 60–90m or so wide, that drain into the Schalflet at Ashington from Wyche and Willoughby areas, respectively, look like they may have been partially straightened/canalised at some point, most credibly perhaps in the early medieval period. Certainly, a Late Saxon/Anglo-Scandinavian digging or re-digging of the 17km-long, marshland Fossdyke between Lincoln and the Trent (which involved the straightening and canalising of the lower reaches of the River Till) has been strongly argued for, confirming the feasibility of large-scale canalisations in the local region in that era.<sup>105</sup> In the same way, recent work on the southern Fenland has identified multiple Late Saxon—and possibly Middle Saxon—canalised channels known as ‘lodes’ (from Old English *lād*, ‘to lead, an artificial waterway or canal’), something that offers further support for this notion.<sup>106</sup> Indeed, it has been noted that Roman and Medieval canals in the Fenland frequently appear to reuse and join together natural roddons, which would fit here, with it being further observed that this would indicate that the ‘roddons were open channels at these times and used for transport and/or drainage’ then, which is also of note.<sup>107</sup>

Similar suspicions of early medieval attempts to control these watercourses across the saltmarshes apply to a third major channel joining Schalflet. This is the wide roddon around 160m wide that flows west–east from Firsby Clough to join the Schalflet at Croft Manor at a north-easterly angle, suggesting that the primary direction

<sup>104</sup> Malone, *Triton Knoll*, fig. T4.

<sup>105</sup> M. Jones, D. Stocker and A. Vince, *The City by the Pool: Assessing the Archaeology of the City of Lincoln* (Oxford, 2003), pp. 15, 104, 116, 241–2, 267, though see also the discussion of this canal in J. Bond, ‘Canal construction in the early middle ages: an introductory review’, in J. Blair (ed.), *Waterways and Canal-Building in Medieval England* (Oxford, 2014), pp. 153–206 at pp. 167, 175–6.

<sup>106</sup> S. Oosthuizen, *The Anglo-Saxon Fenland* (Oxford, 2017), p. 116ff, and see further the discussions by a number of authors in J. Blair (ed.), *Waterways and Canal-Building in Medieval England* (Oxford, 2014).

<sup>107</sup> Smith *et al*, ‘Roddons and their environmental significance’, p. 261

of its flow was thereafter northwards to Burgh and Orby marshes and ultimately the sea at Addlethorpe/Chapel St Leonards (fig. 22).<sup>108</sup> This is known in part as Lymn Bank and it contains the sinuous channel of the Old Lymn (or Little Lymn) river, aka the original, natural course of the River Steeping. The Little Lymn still flows along its top and may well represent a final channel for this roddon, being reminiscent in its course of North Drain and Orby Drain atop the Schalflet. As Steve Malone has observed, this roddon looks clearly artificial to some extent, with its long, straight edges, and either represents another canalised major roddon or perhaps an early embankment of the Lymn/Steeping creek—cf. Dudic Bank and *Grene Hadyke?*—with marine flooding then raising the level within it (this roddon sits unusually high in comparison to the surrounding land surface for the Lincolnshire Marsh).<sup>109</sup> Given that the marine flooding of the Late and post-Roman eras is thought to have extended into this area and then much further west up to Firsby and Great Steeping,<sup>110</sup> this is certainly credible, and some combination of the two explanations is possible. In either case, the remodelling is unlikely to be later than the twelfth century. By this time, the southern mouth of the Schalflet was largely blocked by medieval salterns and the village of Ashington/Hassaken had been founded further north and astride the channel, although Simmons considers there may still have active sea channels in the Croft area right into perhaps the fifteenth century.<sup>111</sup> Furthermore, by the early thirteenth century it is clear that the waters of the Lymn/Steeping had been largely redirected from its original eastern course down the Old Lymn and instead ran southwards down an artificial channel, the *Lusdyke*, to the Gooddyke in Wainfleet and thence to scour Wainfleet Haven. This is first mentioned as the New Lymn (*Novum Limme*) in 1219 and by 1240 it is clear that the majority of the Lymn’s water flowed down this new course, with a sluice—Firsby Clough—to allow the occasional redirection of water into the Old Lymn in order to ‘refresh the ditches of the manor of Croft and to water the cattle’.<sup>112</sup> Needless to say, it seems likely that any extensive remodelling or embanking of the roddon and creek of the Old Lymn must predate this redirection of its freshwater component to some significant degree.

Whatever the case may be on the Old Lymn/Lymn Bank, it is clear that the ‘final channel’ of this waterway with its variable flow—initially intended to be turned ‘on’ and ‘off’ alternately every three weeks between Easter and Michaelmas, although eventually it was only turned on ‘if need require in the time of drought’<sup>113</sup>—was, at some point, subject to further interference. In particular, it was redirected from the north-eastern route indicated by both the roddon and the current channel’s orientation immediately before Croft Manor and instead primarily into a southern channel that then flowed down the side of Croft moated manor and on towards Wainfleet. This looks like a reuse of the final open channel of the section of the Schalflet that extended between Croft Manor and Wainfleet, and this redirection had certainly taken place by the early sixteenth century, when the current route of the Little/Old Lymn, with its abrupt 90 degree ‘right turn’ at Croft Manor to flow southwards is recorded as part of the ‘Laws for the Little Lymn’.<sup>114</sup> Subsequently, it would seem that the channel was diverted once again further south, in order to avoid Wainfleet and instead flow across the saltmarsh towards the sea.<sup>115</sup> Prior to this undated but probably late medieval southwards redirection, the ‘final channel’ of the Old Lymn is likely to have flowed a little way north along the line of the Schalflet, as the Old Lymn’s north-easterly orientation just before Croft Manor suggests, before perhaps following the line of a major channel—evidenced by roddons, down-cut portions and field boundaries—that joined the Schalflet but which was primarily attached to the smaller ‘trunk channel’ at Skegness, where its waters could then have met the sea at the Croft–Skegness parish

<sup>108</sup> Simmons, *Fen and Sea*, p. 152 also notes this.

<sup>109</sup> Malone, *Triton Knoll*, fig. T2 and pp. 8, 17 (feature 185),

<sup>110</sup> Brew *et al*, ‘Palaeocoastlines of the Fenland embayment’, fig. 27.

<sup>111</sup> Simmons, *Fen and Sea*, for example pp. 143–5 and fig. 4.5.

<sup>112</sup> A. E. B. Owen, ‘A thirteenth-century agreement on water for livestock in the Lindsey Marsh’, *The Agricultural History Review* 13.1 (1965), 40–6; Owen, *Medieval Lindsey Marsh*, pp. 87–9; Simmons, *Fen and Sea*, p. 95.

<sup>113</sup> Owen, ‘A thirteenth-century agreement’.

<sup>114</sup> Simmons, *Fen and Sea*, pp. 150–6.

<sup>115</sup> Simmons, *Fen and Sea*, pp. 155–6, and see the map in the section on the Boston to Wainfleet coast.

boundary (see, for example, fig. 25). Such would certainly explain the mysterious lower part of the Lymn visible on antique mapping, which seems not to have joined Wainfleet Haven but instead reached the sea south of Skegness.<sup>116</sup>

Turning to this smaller ‘trunk channel’ visible on the map-view, this has a similar shape and width to Schalflet but is much shorter in length, simply encircling the modern town of Skegness and joining the sea at both Winthorpe and the Croft–Skegness parish boundary. As with Schalflet, the creek’s line is preserved in the sinuous channel of current drains (the Main Drain in the south and the South Drain in the north), which may represent former ‘final channels’, as well as in nineteenth-century field boundaries, as are the ‘main’ and ‘minor’ channels that fed into it. Unlike with Schalflet, the course of this channel has no boreholes on its line, but Jukes-Browne reports that diggings of about 8 feet in depth at its Winthorpe mouth in 1877 showed there to be indeed ‘an old muddy creek’ there.<sup>117</sup> As to the longevity of this feature, specific evidence is lacking beyond the preservation of both its line and width in the nineteenth-century field boundaries, which is suggestive, but it is worth noting that at its Winthorpe mouth there is an intriguing major diversion inland and then back again of the line of the probably late sixteenth-century ‘Roman Bank’ sea-bank which can be seen on the map-view. This suggests that there was still a significant, albeit much less wide, creek here when this sea-bank was built. Indeed, the later seventeenth-century ‘Green Bank’, which lies seawards of the ‘Roman Bank’, likewise seems to have a gap in it for a smaller but still reasonably sizeable creek here (see figs 27 and 28). At its southern mouth, where it meets Croft Bank—usually said to be a medieval sea-bank, although Simmons suggests it may be of various dates and in part post-medieval<sup>118</sup>—the line is blocked by higher ground above 3m OD that may represent medieval saltern mounds, if it is not modern in origin. In any case, the line can be seen to continue beneath the higher post-medieval marsh deposits of the area to the south of Croft Bank, with a probably seventeenth-century sea-bank and the Cow Bank (first recorded as *Stone Camsey* in the seventeenth century) being constructed to either side of this mouth, suggesting that a notable channel entered the sea there even this late (see the discussion and map in the Boston–Wainfleet section below).

With regard to the major and minor creeks that drain into this trunk channel, it is worth noting that several of them form parish boundaries, suggesting both their importance in the landscape and their potential late survival in some form in comparison to other areas of the coastline. In terms of the dating of these channels,



Figure 23: The inland diversion of the sixteenth-century ‘Roman Bank’ at Winthorpe Gout, which the dotted parish boundary between Skegness and Winthorpe follows, on the OS Six Inch map; this seems to suggest the existence of a significant creek/inlet here then, which may still have been present in the seventeenth century (Source: National Library of Scotland).

<sup>116</sup> See Simmons, *Fen and Sea*, p. 150; R. C. Wheeler, *Maps of the Witham Fens from the Thirteenth to the Nineteenth Century* (Woodbridge, 2008), p. 5, maps 8 and 12:1.

<sup>117</sup> A. J. Jukes-Browne, *The Geology of Part of East Lincolnshire, including the country near the towns of Louth, Alford, and Spilsby* (London, 1887), p. 107.

<sup>118</sup> Simmons, *Fen and Sea*, pp. 135, 136.

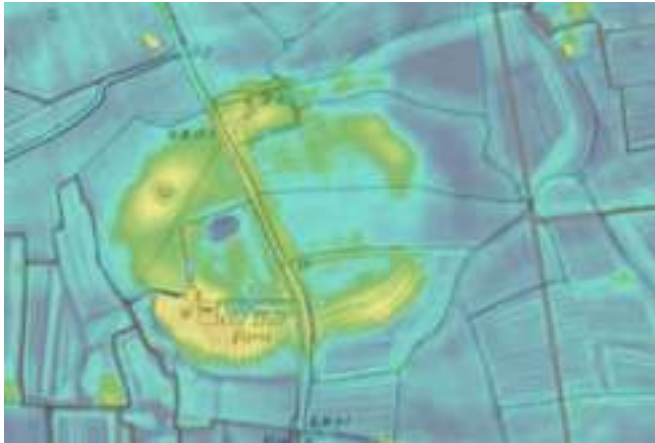


Figure 24: The location of Addlethorpe Hall, believed to be sited on a glacial till 'island'. There are clear traces of ridge and furrow around the island (Map source: OS Six Inch 1907, National Library of Scotland).

Anglo-Saxon material has been found in the vicinity of these tributary channels, where they flowed past both the Teapot Hall medieval settlement site—which has a little possible Late Saxon pottery<sup>119</sup> and one or two finds of eleventh-century metalwork from just to the south<sup>120</sup>—and the Slut Hall–Nettle Hill settlement site, which has two fragments of sixth-century Anglo-Saxon brooches, some of the only material of immediate post-Roman date from the entire study area.<sup>121</sup> By the end of the early medieval period, at least some of these major tributary channels had probably become blocked or silted up, however. For

example, a roddon running through Winthorpe itself forms the foundations of the original twelfth-century church here, probably via one of several small medieval saltern mounts that look to fill the channel on Lidar, which would fit with suggestions made by Arthur Owen that medieval churches on the Outmarsh often utilised such mounds. Certainly, he identifies the fourteenth-century church at Croft, which stands close to a possible short channel leading to the Schalflet, as another probable church situated on a saltern mound (clearly visible in the Lidar data).<sup>122</sup> Other examples of the same phenomenon may potentially be had from the channel that looks to have run through Ingoldmells and Addlethorpe, with Ingoldmells rectory, Ingoldmells church (originally late eleventh-century?),<sup>123</sup> and Addlethorpe church (fifteenth-century, but mentioned in Domesday Book)<sup>124</sup> all constructed atop small mounds by or in the likely former channel—both villages are, incidentally, mentioned in Domesday Book and so had their origins prior to the mid-eleventh century, suggesting that this area, at least, was fairly dry and probably protected from the sea by that point (see further below).<sup>125</sup> Something similar may have been the case at Thorpe St Peter too, also mentioned in Domesday, where a number of mounds are found that are surrounded by channels that drain into Schalfleet (and perhaps the original Wainfleet Haven), atop one of which is Thorpe's early thirteenth-century church.<sup>126</sup>

Of course, the Lidar data shows a number of features other than the roddons, channels and probable saltern mounds discussed so far. In particular, in the far north of the map-view there are a number of large 'islands' in the marsh. These are the glacial deposits rising above the marine sediments that are mapped by the British Geological Survey and mentioned earlier, but there are far more in evidence here than are recorded in the BGS mapping. That these are all, indeed, glacial 'islands' has been supported recently by Evans *et al*, and the borehole evidence that we have from the 'additional' glacial islands visible on Lidar in the Lincoln coast study region seems to support this.<sup>127</sup> These islands are most naturally discussed in the next section, but it is worth noting

<sup>119</sup> Lindsey Archaeological Services, *Burgh-le-Marsh – Ingoldmells Rising Main: Archaeological Watching Brief* (1995), p. 10 and Appendix 1 (27), dated to possibly the tenth century.

<sup>120</sup> Portable Antiquities Scheme, LIN-56A365 (a hasp dated *c.* 1000–1200) and LIN-D52D9C (an eleventh-century stirrup strap mount). The Teapot Hall (Addlethorpe/Orby parishes) settlement site in Lincolnshire HER MLI41794;

<sup>121</sup> Portable Antiquities Scheme, LIN-3776E8 (small-long brooch foot) and NLM-38E781 (cruciform brooch foot fragment). The Slut Hall–Nettle Hill site in Burgh-le-Marsh parish is Lincolnshire HER MLI88895.

<sup>122</sup> Owen, 'Salt, sea banks', p. 46.

<sup>123</sup> Lincolnshire HER MLI41643; P. Everson and D. Stocker, *Corpus of Anglo-Saxon Stone Sculpture V: Lincolnshire* (Oxford, 1999), Ingoldmells 01, 02, 04; C. W. Foster and T. Longley (trans. & eds), *The Lincolnshire Domesday and the Lindsey Survey* (Lincoln, 1924), p. 157 (Ingoldmells church is presumably one of the two churches of Addlethorpe).

<sup>124</sup> Lincolnshire HER MLI41810; Foster and Longley, *Lincolnshire Domesday*, p. 157.

<sup>125</sup> Foster and Longley, *Lincolnshire Domesday*, pp. 27, 36, 70, 110, 137, 157–8, 201.

<sup>126</sup> Owen, 'Salt, sea banks', p. 46; Lincolnshire HER MLI42254; Foster and Longley, *Lincolnshire Domesday*, p. 33.

<sup>127</sup> See above and Evans, *et al*, 'Lincolnshire and Norfolk coasts during MIS 2 and 6'.

that they clearly extend further south than the BGS suggests, with a major ‘island’ being found in Addlethorpe parish, where it became the site of Addlethorpe Hall/Old Hall Farm. Although described as a demolished nineteenth-century farmstead on the Lincolnshire HER, this was the seat of the Mottram family in the early modern period and may have medieval roots, given the presence of notable quantities of medieval pottery from the island.<sup>128</sup>

Looking more broadly at the settlement pattern in this section of the Outmarsh as revealed by both the Lidar and mapping data, it can be noted



Figure 25: The approximate area of slightly higher marsh silts visible on Lidar in the south of the map-view that might be equivalent to Simmons’ medieval southern inlet; the map also shows the position of the inland medieval Dudick Bank in yellow (Modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

that it seems to fit, to some degree, with Ian Simmons’ observation that the centre of this map-view appears to consist of an ‘Empty Area’, devoid of significant settlement activity, with the major villages recorded by the twelfth-century being mainly concentrated on the northern islands, the western higher ground, or the coastal strip (fig. 26).<sup>129</sup> That this is not wholly the case can be seen from the distribution of cropmarks recorded by the National Mapping Program/the Lincolnshire HER, which shows small medieval settlements at places like Wyche, Teapot Hall, and Slut Hall–Nettle Hill (all mentioned above), with archaeological finds recorded by the HER and the Portable Antiquities Scheme confirming in the latter two cases that these settlements had their origins before the Norman Conquest.<sup>130</sup> Nonetheless, the contrast is dramatic, and Simmons attributes this to a relatively late dewatering of the central area of the landscape, with an inlet of the sea connected to the Wainfleet area continuing to be active here potentially well into the medieval period. Certainly, the Lidar data would offer some support for this view, as there is a zone of slightly higher flood silts with associated channels in the south of this zone, which looks like it might represent a late, wide area of continued marine influence here compared to further north (fig. 25). Likewise, place-names from the whole central zone strongly suggest they were related to settlements on very wet ground, including Slut Hall (which probably reflects Middle English *slutte*, ‘mud’) and Slackholme (‘muddy island’, from Middle English *slēke*, ‘muddy’).<sup>131</sup>

Also relevant to this may be the feature known as Dudick Bank, which presents as a linear, but not wholly straight, inland feature that ran south from the Schalplet at Addlethorpe right through to Winthorpe parish at

<sup>128</sup> Lincolnshire HER MLI119826; OS original series map of the Louth region (1824); W. White, *History, Gazetteer, and Directory of Lincolnshire* (Sheffield, 1856), p. 517; A. W. Gibson, *Notes on the Visitation of Lincolnshire 1634* (Lincoln, 1898), pp. 208–22; S. Ellis, H. Fenwick, M. Lillie and R. Van der Noort (eds), *Wetland Heritage of the Lincolnshire Marsh: An Archaeological Survey* (Hull 2001), p. 198 (Ingoldmells-14).

<sup>129</sup> Simmons, *Fen and Sea*, pp. xxxiv, 92, 97–9, 157–8.

<sup>130</sup> Ashington (Orby, Hogsthorpe and Addlethorpe parishes): Lincolnshire HER MLI88788; Wyche (Hogsthorpe parish): MLI88789; Teapot Hall (Addlethorpe and Orby parishes): MLI41794; Slut Hall–Nettle Hill (Burgh-le-Marsh parish): MLI88895.

<sup>131</sup> K. Cameron, *A Dictionary of Lincolnshire Place-Names* (Nottingham, 1998), p. 111.

Wheel Gowt and is marked on the Six Inch OS maps and the nineteenth-century tithe maps.<sup>132</sup> Given its name, it may be an extension of the embankment known as Dudic Bank (aka *Dufdic/Dunedyk*) that constrained the mouth of the Schalflet, above. As such, it could well represent a sea-defence—called in medieval Lincolnshire by names involving *dic/dik*, ‘embankment, sea-bank’—that ran all along the edge of the Schalflet and then southwards from this to protect the major settlements of Addlethorpe, Ingoldmells and Winthorpe from flooding via the inland marine channels and inlet. This feature seems to be mentioned in 1366–7, when the drainage of meadows and pastures belonging to Winthorpe and Ingoldmells that were located to the west of ‘a certain Wardyke [protective bank], called *Defdyke*’ was being determined.<sup>133</sup> Given the parishes involved and the reference to pastures to the west of *Defdyke*, this must be a reference to Dudick Bank rather than the northerly, east–west Dudic Bank. Needless to say, this would seem to suggest that at some point earlier in the medieval period there was a deliberate attempt to defend the coastal strip, with its larger settlements, from flooding from the north and west via inland marine channels and inlets, as well as from the open sea to their east and south (see below), and also that by the fourteenth century the parts of the central area close to the Dudick Bank were characterised by pastures and meadows and subject to the institution of new drainage systems, suggesting that they were no longer exposed to regular marine influence then. Of course, there may still have been some marine influence further south even at this date, particularly if Croft Bank is not wholly medieval, as noted above. Simmons suggests that elements of the central ‘Empty Area’ inlet remained open right to the end of the medieval period, and whilst this is open to debate and there is no solid evidence for

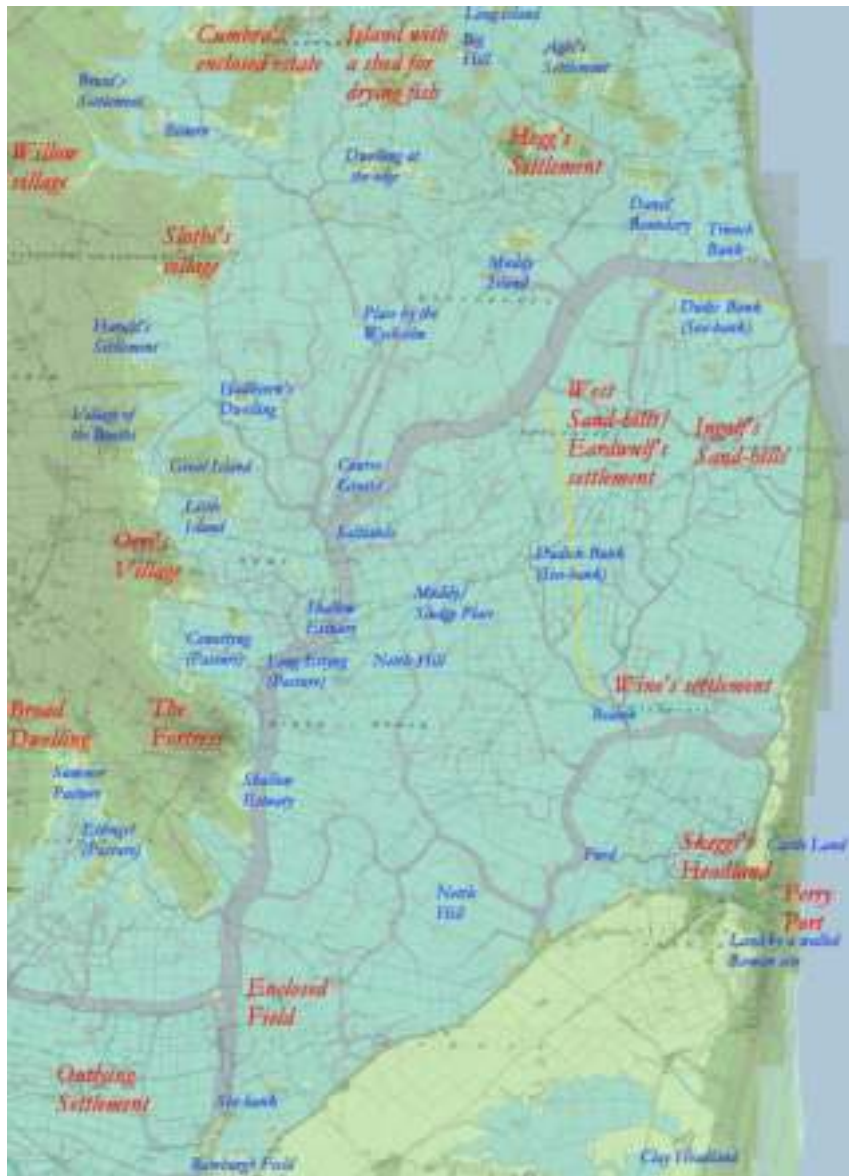


Figure 26: The meanings of selected major (red) and minor (blue) place-names in the Skegness area, showing also the central ‘empty area’ devoid of major early settlements.

<sup>132</sup> The Six Inch OS map names it as Dudick Bank Drain, but on the 1842 tithe maps of Ingoldmells and Addlethorpe it is named simply Dudick Bank.

<sup>133</sup> E. Oldfield, *A Topographical and Historical Account of Wainfleet and the Wapentake of Candleshoe, in the County of Lincoln* (London, 1829), p. 291. Wardyke here derives from Old English *weard*, ‘protection’ + *dic/dik*, ‘embankment, sea-bank’.

this proposition at present, individual smaller inlets (such as a potential ‘Croft Haven’, mentioned in a sixteenth-century document)<sup>134</sup> might have continued to have had a marine component this late.

Finally, mention needs to be made of the areas on the southern and eastern edges of the map-view. The Lidar shows a mixture of banks here, such as Croft Bank, Roman Bank and Green Bank. All of these are, it needs to be emphasised, likely to be either partially late medieval in date, as with Croft Bank, or definitely post-medieval in date, as with the ‘Roman Bank’ running from Skegness to Ingoldmells—constructed in *c.* 1570—and Green Bank in Skegness—constructed in *c.* 1670.<sup>135</sup> This is not to say that there were no sea-banks along the east-facing coastal strip prior to the late sixteenth centuries, protecting it from the sea; medieval and early modern documents mention sea-banks at Hogsthorpe sea-shore (now part of Chapel St Leonards), Ingoldmells, Winthorpe and Skegness (both on its east and to its south) on multiple occasions.<sup>136</sup> Rather, as has often been noted, the issue is that a substantial strip of land has been eroded from the coastline here, between Chapel Point and Skegness, probably primarily between the late thirteenth and seventeenth centuries, although losses continued even into the twentieth century.<sup>137</sup> Some of the destructive floods responsible for this erosion could be highly dramatic, as in 1570, when the worst storm of the sixteenth century appears to have almost completely levelled the settlement of Mumby Chapel (Chapel St Leonards) here, as Holinshed related in his contemporary *Chronicles*, saying that ‘the whole town was lost, except three houses... Likewise, the church was wholly overthrown except the steeple... Master Pelham lost eleven hundred sheep at Mumby Chapel’. He also recounts that the tide was so high that a ship was driven upon the top of a house in the village; the sailors, thinking it a rock, leapt onto it for safety and only survived by clinging to its roof. Whilst up there, they succeeded in rescuing the mistress of the house, who had apparently been ‘lying in childbed’, although her husband and child drowned.<sup>138</sup>

The exact amount of land lost on the east coast here is unclear, but it seems likely to have been very substantial—perhaps up to a mile wide—and included the whole town and port of ‘Old Skegness’. Probably originally a Roman defended ferry-port of some significance,<sup>139</sup> the medieval port of Skegness was said in the twelfth century to have been one of the best ports on the Lindsey coast and ‘a good anchorage in all winds, except from the south and south-west’,<sup>140</sup> being located on a creek at the western entrance to the Wash where it

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<sup>134</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 138, 141. See the map of the Wainfleet area included in the section on Boston to Wainfleet for a suggestion of the location of Croft Haven.

<sup>135</sup> Robinson, *Lincolnshire Seaside*, p. 21.

<sup>136</sup> Owen, ‘*Hafdic*’, pp. 51–2; Massingberd, *Court Rolls*, pp. 2, 12, 24, 48, 60–1, 91–3, 97, 143, 156–7, 160, 165, 204, 213, 220, 290–1, 293; W. Dugdale, *The History of Imbanking and Drayning of Divers Fenms and Marshes* (London, 1662), p. 165.

<sup>137</sup> See A. E. B. Owen, ‘Coastal erosion in East Lincolnshire’, *Lincolnshire Historian*, 9 (1952), 330–41; Owen, ‘Upkeep of the Lindsey sea-defences’; Robinson, *Lincolnshire Seaside*, pp. 20–1, 57, 61; W. Kime, *The Book of Skegness* (Buckingham, 1986), pp. 22, 83–6. See Owen, ‘*Hafdic*’, p. 48, for a speculative map of the lost lands between Chapel Point and Skegness; north of Chapel Point, the medieval *Hafdic* seems to survive right up to Sandilands, before being eroded away again at Sutton and Mablethorpe, where villages are similarly documented as being lost to the sea.

<sup>138</sup> R. Holinshed, *Chronicles of England, Scotland and Ireland*, 6 vols. (1577, ed. London, 1808), vol. 4, pp. 254–6 (with modernised spelling). Note, the date of the disaster at Mumby Chapel is often given as 1571, but this is a mistake: see A. E. B. Owen, ‘Chapel St Leonards and the Flood of 5 October 1570’, in C. Sturman (ed.), *Lincolnshire People and Places: Essays in Memory of Terence R. Leach* (Lincoln, 1996), pp. 87–90.

<sup>139</sup> See B. Whitwell, *Roman Lincolnshire* (Lincoln, 1992), pp. 51–3, and A. Owen and R. Coates, ‘*Traiectus*/*Tric*/Skegness: a Domesday name explained’, *Lincolnshire History and Archaeology* 38 (2003), 42–4. The Domesday name for Skegness, *Tric*, most plausibly derives from a Romano-British *Traiectus*, ‘crossing point, ferry’, transmitted through Late British/Archaic Welsh; likewise, minor medieval place-names from the Skegness area contain the normal Old English word for a Roman town, *caestir*/*ceaster*, and sixteenth-century accounts say that the drowned town was walled, something that is usually an indication of Roman origins (John Leland, *The Itinerary of John Leland the Antiquary*, ed. T. Hearne (9 vols, Oxford, 1770), vol. 7, p. 152).

<sup>140</sup> P. Hughes, ‘Roger of Howden’s sailing directions for the English coast’, *Historical Research* 85 (2012), 576–96 at p. 589; P. G. Dalché, *Du Yorkshire a L’Inde: une Géographie Urbaine et Maritime de la fin du XIIe Siècle (Roger de Howden?)* (Genève, 2005), p. 175; W. Kime, *The Book of Skegness* (Buckingham, 1986), p. 12; Robinson, *Lincolnshire Seaside*, p. 21.

was sheltered by a ‘ness’ or promontory of dunes and beaches running south from the Ingoldmells shore. The town seems not only to have been walled, but also to have had a castle and a guildhall, all of which suggests that it was a place of some importance.<sup>141</sup> Indeed, in the fourteenth and fifteenth centuries it was one of the main home ports for Lincolnshire’s fishing fleet, with a winter herring fair,<sup>142</sup> and it moreover had Scandinavian trading connections (the Baltic timber used in the construction of Tattershall castle arrived via Skegness).<sup>143</sup> However, in 1500 Old Skegness was said to be ‘in very great danger of the sea’, and subsequently the sea ‘rushed at last over the barriers that had been raised on this level shore and recovered his ancient possession.’ The final destruction seems to have come around 1526, when the ‘church and a great part of the parish was submerged’, according to a contemporary ecclesiastical subsidy. By 1540, the town seems to have been entirely swallowed up

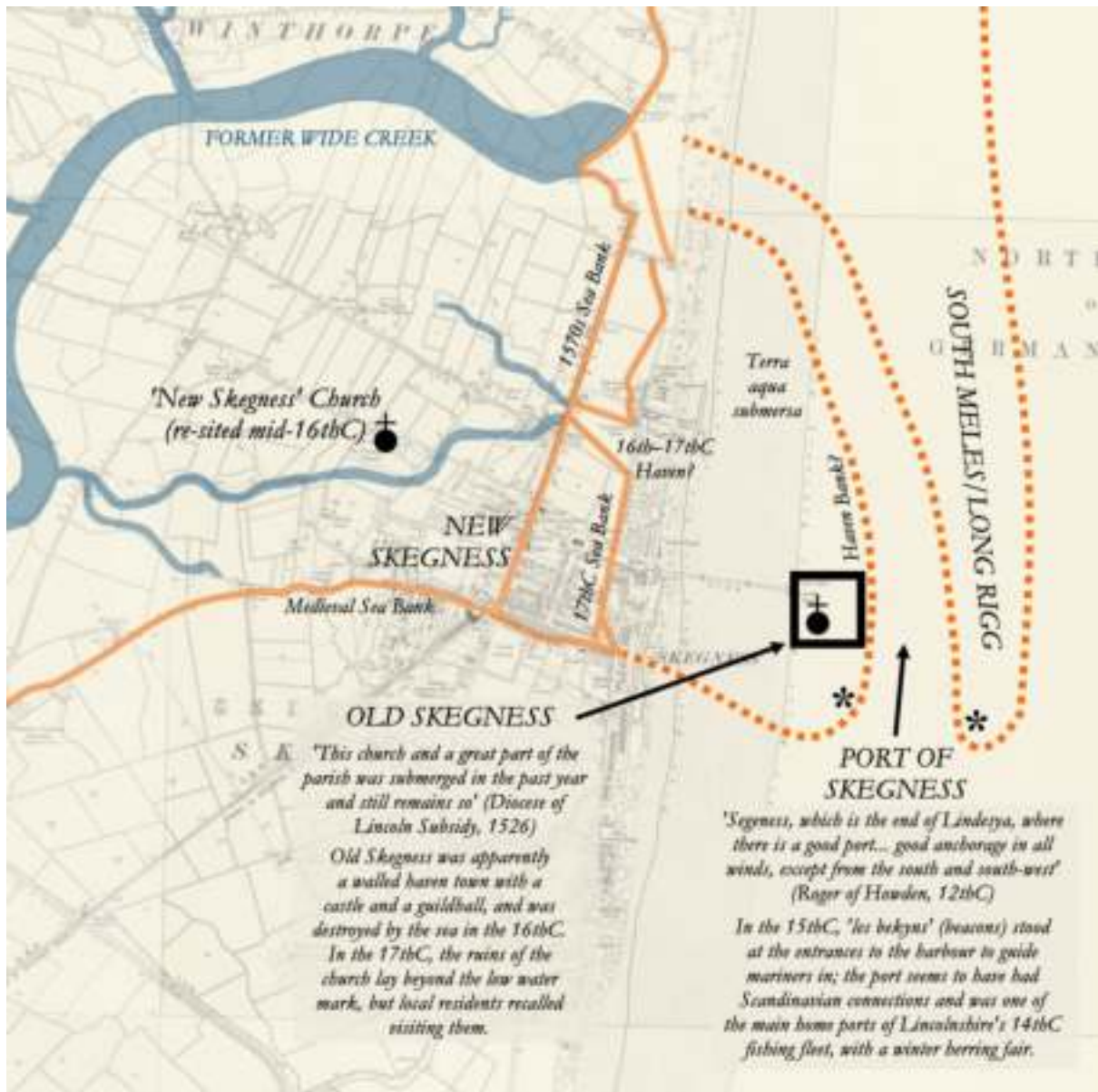


Figure 27: A suggested reconstruction of the coastline prior to the loss of Old Skegness in the early sixteenth century, along with the known sea-banks still surviving. The seventeenth-century Green Bank interestingly outlines a probable new later sixteenth- and seventeenth-century haven and also seems to suggest, via a gap in it, that the Winthorpe creek was still active when it was built. The ‘Haven Bank’ is mentioned in the sixteenth century, whilst the medieval sea-banks to the south of Skegness seem to survive as Croft Bank/the High Street (Map source: OS Six Inch, National Library of Scotland).

<sup>141</sup> Leland, *Itinerary*, vol. 7, p. 152; Dugdale, *History of Imbanking*, p. 165.

<sup>142</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 182, 190.

<sup>143</sup> Pawley, *Lincolnshire Coastal Villages*, p. 80; Robinson, *Lincolnshire Seaside*, p. 21; Kime, *Skegness*, p. 15.



by the waves, although ‘manifest tokens of old buildings’ including the church were said to be visible—and occasionally visitable—at low tide into the later sixteenth century, when they were located around half a mile or so out to sea,<sup>144</sup> and in 1633 Viscount Castleton testified that ‘the ancient church of Skegness and divers parcels of ground anciently within the parish... now lie within the sea and are usually covered with the waters thereof’.<sup>145</sup>

The church and village of Skegness were subsequently rebuilt much further inland, behind and upon the ‘Roman Bank’ of the 1570s, but this settlement was very much impoverished compared to what had been here before, with Leland in the 1540s described New Skegness as but ‘a pore new thing’.<sup>146</sup> Nonetheless, it seems that there was also a post-disaster attempt to rebuild the haven further inland, as well as the village and church—a clear Haven inlet is mapped out by the line of the Green Bank of *c.* 1670 immediately opposite the pre-1792 Ship Inn in Winthorpe (now Skegness, see figs 27 and 28).<sup>147</sup> That this haven outline did indeed fulfil a role as New Skegness’s post-medieval harbour would seem to be confirmed by documentary references to a new jetty of great timber being built at Skegness in 1565 using 81 trees shipped from Coningsby to Skegness,<sup>148</sup> and the fact that in the late seventeenth century and very early eighteenth century ships were unloading large cargoes of timber, bricks and pantiles, along with iron from Hull and stone from Ketton (Rutland), Pinchbeck and Sunderland, at the harbour at Skegness, all of which was subsequently used in the construction of buildings at Gunby Hall.<sup>149</sup> Unfortunately, however, this seems to have either fallen out of use or silted up after 1702, with no obvious trace of it beyond the line of Green Bank on the late eighteenth- and early nineteenth-century maps of Skegness—coal was then instead apparently landed on the beach and stored at the sea-end of the High Street (Lumley Road), according to the Skegness Tithe Map.

Aside from the post-medieval banks, the Lidar data also shows an expanding area of sandhills or dunes in this map-view. These dunes are relatively thin in the north, but widen significantly to the south of Skegness, where they are believed to be largely post-medieval in date, representing a redeposition of the destroyed defensive promontory that protected Old Skegness at a site further to the south, thus creating Gibraltar Point.<sup>150</sup> North from Skegness, their date seems to vary: at Moggs Eye, just north of the present map-view, they seem to have been formed around 750 years ago,<sup>151</sup> but they must have been in existence earlier than this in the Ingoldmells area in order that this village, in existence since at least the eleventh century, could get its name (this derives from the Old Norse personal name *Ingólfr* + *ON melr*, ‘sand-banks, dunes’).<sup>152</sup> It is, however, very likely that the current dunes formed later and that the original dunes after which Ingoldmells was named were further seaward, given the above demonstrable loss of land on the east coast here. Lastly, it can be observed that there is a wide expanse of higher ground inland from the dunes between Skegness and Gibraltar Point and south of Croft Bank, which largely represents post-medieval reclaimed saltmarsh—reclamations began here in the mid-/late sixteenth century, around Wainfleet and Skegness, and then especially in the seventeenth century. As will be seen in the final map-view, whilst traces of the main channels in the low-lying area north of Croft Bank can be seen beneath

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<sup>144</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 81–3, discusses contemporary and near-contemporary accounts of all this; see also Owen, ‘Coastal erosion’, pp. 339–41.

<sup>145</sup> Owen, ‘Coastal erosion’, pp. 340–1; Pawley, *Lincolnshire Coastal Villages*, pp. 81–3.

<sup>146</sup> Leland, *Itinerary*, vol. 7, p. 152.

<sup>147</sup> See the map for the line of Green Bank, and Lincolnshire Archives LQS/D/9/1/3/23 for the Ship Inn’s appearance in the earliest surviving alehouse recognizance from Winthorpe, dated 17 September 1792.

<sup>148</sup> Owen, ‘Upkeep of the Lindsey sea-defences’, p. 28; Kime, *Skegness*, p. 15.

<sup>149</sup> Lincolnshire Archives MG/5/2/6 (receipts of Sir William Massingberd from 1687) and MG/5/2/7 (receipts from 1698 and 1702 in the hand of William Massingberd); Kime, *Skegness*, pp. 16–17.

<sup>150</sup> Robinson, *Lincolnshire Seaside*, p. 21; Pawley, *Lincolnshire Coastal Villages*, p. 81; Simmons, *Fen and Sea*, p. 78 and throughout.

<sup>151</sup> M. L. Clarke and H. M. Rendell, ‘The development of a methodology for luminescence dating of Holocene sediments at the land-ocean interface’, in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 69–86.

<sup>152</sup> Cameron, *Lincolnshire Place-Names*, p. 69.



Figure 28: The area around the Ship Inn, Winthorpe (later rebuilt across the road in Skegness parish), showing the fields, enclosures and relevant minor names recorded on the 1840s Tithe Maps of Skegness and Winthorpe, along with identifiable sea-banks and former creeks; note the latter are hard to identify under the built up area of modern Skegness, but there are hints of one or two entering the coastal zone here. Buildings that are present on the 1824 OS original series map of this area are marked in red.

this reclaimed saltmarsh, they are hard to trace and the area and its evolution deserves a map and treatment in its own right.

Before moving on up the coast, mention finally needs to be made of the development of the ‘new town’ of Skegness from the late eighteenth century onwards, which shows up very clearly in the DSM Lidar dataset. The origins of Skegness, Cleethorpes and Mablethorpe/Sutton-on-Sea can all be found in the later eighteenth century, when they became home to fashionable Georgian sea-bathing inns and hotels. The initial inns were established at places that were little more than hamlets previously, but the early to mid-nineteenth century saw these inns acting as the seed around which new resorts grew. Skegness was a very small hamlet before about 1770, as can be seen on Captain Armstrong’s map of that decade,<sup>153</sup> its original town and harbour having been lost over two centuries earlier and its smaller post-medieval harbour having apparently fallen into disuse, but it saw notable growth in the late eighteenth and especially the nineteenth centuries after the founding of two bathing hotels (later known as the Vine and Hildred’s) here in the eighteenth century.<sup>154</sup> The town grew slowly

<sup>153</sup> Captain Andrew Armstrong’s *Map of Lincolnshire*, published 20 January 1779, was the first truly detailed county map: British Library Maps K.Top.19.19.5 tab.end. See also the 1793 map of Skegness printed in Kime, *Skegness*, p. 18.

<sup>154</sup> The first references to the Vine—from 1772, 1779 and 1784—indicate that it was established in the early 1770s, probably reusing the Warren House that is shown at around the same spot on Mitchell’s 1765 sailing chart of the Lincolnshire coast, particularly as Robinson identifies possible seventeenth-century fabric in this inn (Robinson, *Lincolnshire Seaside*, pp. 51, 54). The New Inn/Hildred’s is usually said to be early nineteenth century in date, but can



Figure 29: (a) Extract from Greenwood's *Map of Lincolnshire* (1830), showing the three areas of settlement in Skegness by that time, one dominated by the Vine Hotel (or Skegness/Old Hotel) in the south, one around the New Hotel (Hildred's) on the old sea-bank, and one around the sixteenth- to eighteenth-century haven and its associated Ship Inn in the north (Source: Daniel Crouch Rare Books). (b) Extract from Captain Andrew Armstrong's *Map of Lincolnshire* (1779), showing the coast around Skegness, where a 'Bathing House and Tavern'—the Vine—is marked for the first time; this map also includes interesting details, like the lakes around Wainfleet Haven and the large area of saltmarsh at Ingoldmells (Source: © The British Library Board, British Library Maps K.Top.19.19.5 tab.end).

but steadily until 1873, when Skegness gained its railway. After this, its popularity exploded and on the August bank holiday of that year, 10,000 trippers arrived in the town, and in 1878 alone 220,000 excursions went to Skegness. The increased popularity of Skegness due to the railway led to the creation of a new planned town and 'health resort' here from the late 1870s, with wide roads and pavements, although the northern part of the plan was never followed through, and in 1890 Skegness could be described as 'the noisiest and most crowded of the Lincolnshire sea-side places, except Cleethorpes, invaded every day during the summer by enormous numbers of excursionists from the Midland counties'.<sup>155</sup> In the twentieth century, this growth continued apace, with an increasing amount of permanent residence in the town, so that a vast new landscape of buildings and caravan parks now covers the low-lying Outmarsh here, which can be most easily visualised by mapping the changing extent of Skegness as recorded by published OS maps and modern aerial photography (fig. 31).

be probably traced back to at least 1792 in the Lindsey Quarter Sessions alehouse recognizances (Lincolnshire Archive LQS/D/9/1/3/23) and newspaper notices, and the ownership of the land it stood on as recorded in the tithe records for Skegness offers support for Robinson's (p. 55) suggestion that it began as a hostel associated with the Rev. Walls' Moat House (built 1780, replacing an earlier building of his that had been washed away by the sea). The Ship Inn in Winthorpe (now Skegness) can similarly be traced back in these to at least 1792, although this doesn't seem to have functioned as a bathing house at this time, instead being most probably associated with the post-medieval haven that operated at this point and is outlined by the seventeenth-century Green Bank, see above.  
<sup>155</sup> See R. Neller, 'Skegness, Mablethorpe and Cleethorpes: contrasts of land ownership and investment in the development of seaside resorts', *Lincolnshire History and Archaeology* 47 (2012), 35–47; Robinson, *Lincolnshire Seaside*, pp. 54–6, 66–7; Kime, *Skegness*, *passim*.



Figure 30: The Vine Hotel, Skegness, on an early twentieth-century postcard; this was the oldest bathing inn on this section of the Lincolnshire coastline.

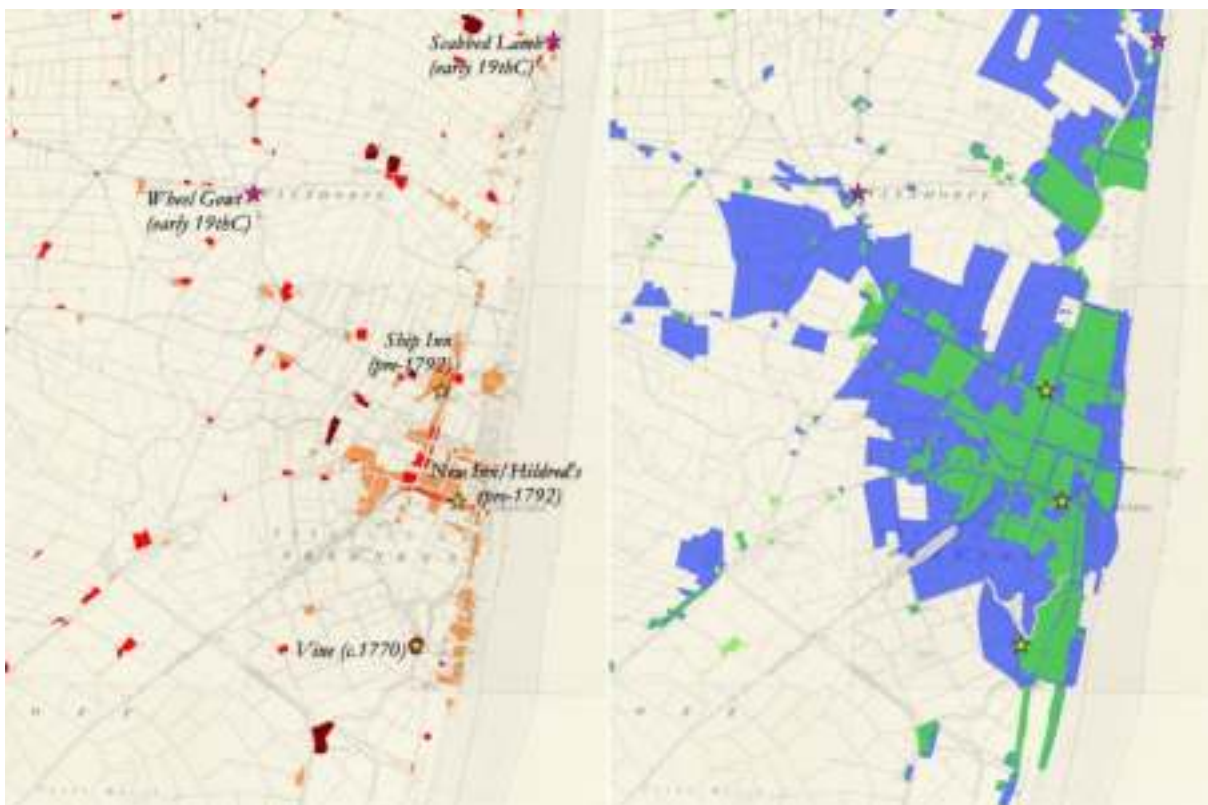


Figure 31: Two maps of the growth of Skegness—(a) a map showing the locations of the early nineteenth-century inns and pubs of the area, alongside areas recorded on the HER as having eighteenth-century roots (dark red), areas of activity by the 1820s (red), and the extent of Skegness at the end of the nineteenth century (orange). (b) Skegness in the 1950s (green) and the 2020s (blue, including caravan parks). The base map is the OS Six Inch maps of 1906 and 1907, National Library of Scotland.

## 2 The Lincolnshire Marsh from Chapel St Leonards to Mablethorpe

The next map shows significant contrasts with that of the southernmost Lincolnshire Marsh. Whereas that map showed a wide expanse of saltmarsh that was dewatered relatively late in parts and had a complex mix of primarily saltmarsh channels, here the picture by turns both simpler and more varied. Key points relating to the evidence from this map-view include the following.

- In terms of the Lidar coverage, the coastal strip in this map area is far less heavily built-up, reducing the need to make use of the DTM Lidar dataset. However, it can be exceedingly difficult to trace former channels in this area, with very small variations in surface elevation across the entire region: almost all of the land between the seacoast and the Middle Marsh lies between 1.5 and 2.1m OD, solidly within the lightening/lighter blue area of the standardised colour ramps. As such, considerable manipulation of the Lidar data was needed in order for channels—which are definitely present—to be traced, as well as use of aerial photographs that confirm that the indistinct roddons shown by the Lidar do reflect large creeks and channels. One intriguing feature in this area of the evidence was the existence of extensive down-cut, yet wide, ‘channels’, that didn’t seem to reflect natural river courses. These ‘channels’ have been identified as of glacial origin in one recent study,<sup>156</sup> but they cut across some of the roddons that can be identified and are arguably better considered a later, post-roddon feature, perhaps resulting from the significant medieval and later marine inundations that are known to have taken place along this coastline, supplemented by quarrying or the deliberate formation of ponds.<sup>157</sup> As such, they are generally not plotted on the maps included here.
- Aerial photography from both historic collections and the Google Earth dataset proved useful in this map-view, but there were less useable images than in the southern Lincolnshire Marsh in the Google Earth collection. Nonetheless, those that were taken in the right conditions for natural creeks to show up helped considerably in confirming the Lidar evidence, which was hard to use in this area.
- There was a poor correlation of pre-twentieth-century field and parish boundaries with many of the more significant roddons, except in the area immediately to the north of Chapel St Leonards and Hogsthorpe, where a relationship was to some degree apparent. Instead, the majority of fields visible on the OS Six Inch maps are straight-sided and seem to have been laid out over the top of the former creeks, unlike in the Skegness–Chapel zone, suggesting that these watercourses had ceased to function as drainage channels when the fields were laid out.
- Geological data was of use on occasion for this map-view. In particular, it was useful to confirm some of the larger channels that could be recovered from the Lidar and aerial photography, showing that some of these cut deep into the glacial till underlying the later marsh deposits, suggesting that they had been present from the original inundation of the region or relatively soon after. There were also more finds of peat in this region than in the southern marsh, with these indicating that there were multiple periods of marine regression here (with freshwater marsh growing temporarily on top of previous saltmarsh) as the shoreline retreated for a period prior to renewed marine inundation. One of these peat finds at Sutton-on-Sea was radiocarbon dated to around 3370–3100 cal BC, whilst other finds of peat were made higher and reflect later prehistoric or Romano-British drier periods.<sup>158</sup>

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<sup>156</sup> Evans *et al*, ‘A chronology’, fig. 5.

<sup>157</sup> Owen, ‘Coastal erosion’; Malone, *Triton Knoll*, p. 9 (features 198 and 200); Rackham *et al*, *Triton Knoll*, pp. 7–8.

<sup>158</sup> D. Brew, ‘Holocene lithostratigraphy and broad scale evolution of the Lincolnshire Outmarsh, eastern England’, *East Midlands Geographer* 20.1 (1997), 20–32 at p. 24, calibrated using IntCal20 and Calib 8.20, and fig. 4 (BGS borehole 508412). Later regressive periods are evidenced at Anderby Creek/Wolla Bank (starting between 899 and

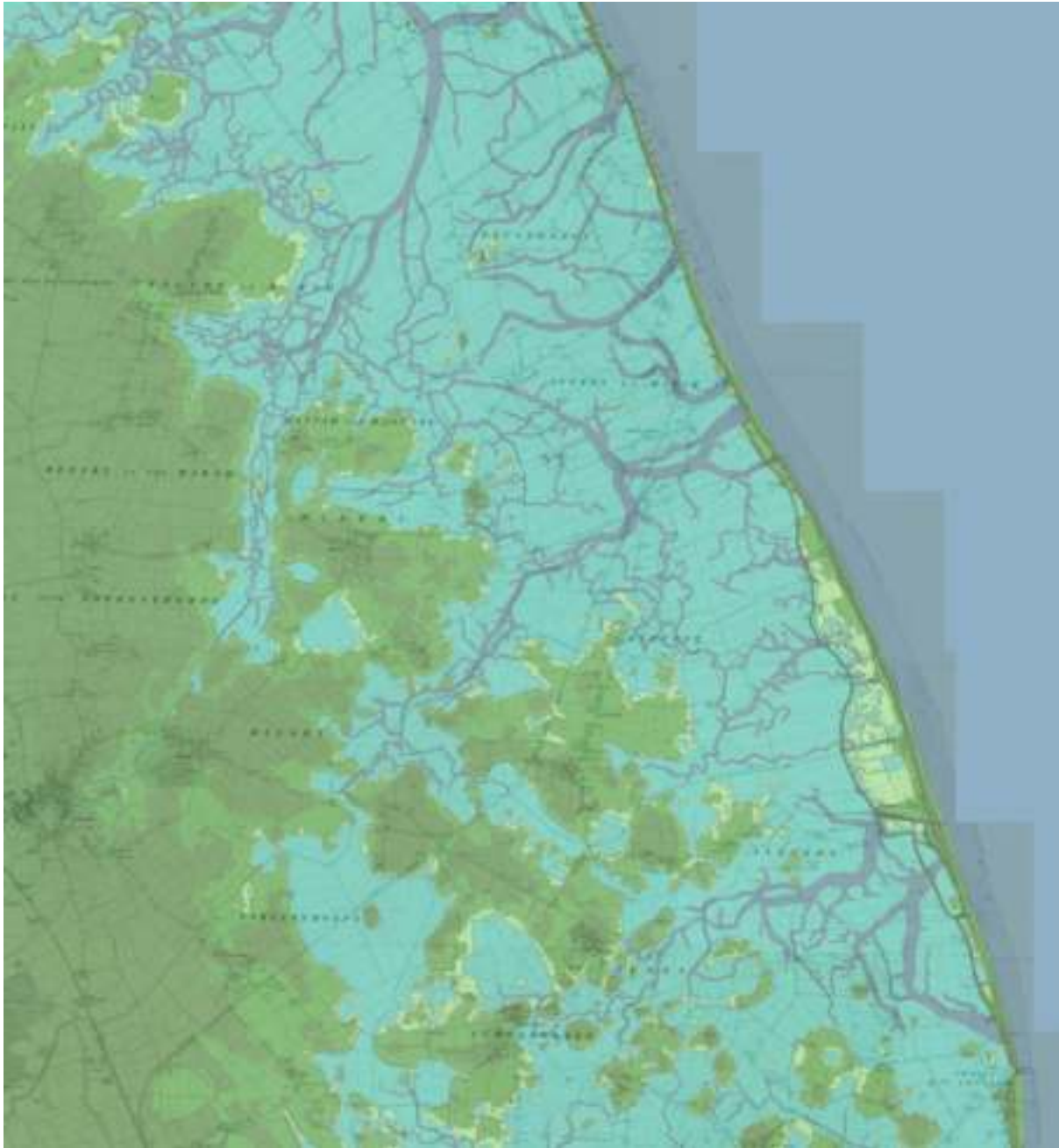


Figure 32: Reconstruction of the channel systems in place in the central Lincolnshire Marsh around Sandilands/Huttoft Bank, based on Lidar data, aerial photographs and other sources as set out in the main text.

Turning to what this all actually shows, there is once again little evidence for multiple periods of overlapping channels, if one discounts the odd, down-cut features as above. Similarly, the major ‘trunk’ channels have the appearance of often being reasonably ancient, with the geological evidence indicating that they cut down into the underlying till to depths of around -8.7m OD at Anderby on the coast (though this roddon is underlain by till at -1.4m OD inland, it should be noted), and below -9m OD between Asserby and Huttoft and separately at Mablethorpe; in both the latter cases, the till is noticeably higher away from the channel, suggesting that the visible drainage pattern on the surface preserved the line of drainage patterns that existed well back into the

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205 BC), Chapel Point (starting 1922 to 1410 BC), Chapel St Leonards (starting 1500 to 1280 BC) and Ingoldmells (similar to Anderby), see S. Derrett and K. Selby, *The Lincolnshire Coast Submerged Landscape: The Current Extent and Composition of the Submerged Forest Deposits from Mablethorpe to Skegness* (unpublished report, May 2020), pp. 9–10; M. Stenton *et al*, *Former Sandilands Golf Club, Alford, Lincolnshire: Archaeological and Geoarchaeological Desk-Based Assessment*, report 2021/106 (York Archaeology, 2021), p. 15 and Table 2 (dates calibrated as above where needed).

prehistoric era.<sup>159</sup> As to the visible channel system itself, the pattern that can be (sometimes tentatively) traced suggests that there were several large trunk channels all up the coast. One probably had a mouth just north or around Chapel Point, another one at the present-day Anderby Creek; in both cases, they seem to have flowed through the area between Anderby and Chapel St Leonards/Hogsthorpe, and the relatively shallow depth of the marsh sediments before glacial till is reach in this area (at +0.4 to +1.5m OD)<sup>160</sup> suggests that it probably didn't start to seriously be impacted by marine transgressions away from the coast until later in the prehistoric era or even in some cases in the Romano-British period.

Further north, the underlying till is noticeably lower and the land here must have been initially inundated well back in the prehistoric era, with till depth varying but generally increasing markedly the further north we go; the depths reached around Mablethorpe and northwards, as determined by a thorough survey of all borehole evidence, suggests this was amongst the first areas of the Lincolnshire coastal zone to flood in the Mesolithic era. In the zone between Mablethorpe and Anderby, there are minor creeks reaching inland from the Huttoft Bank area, but the major feature is an exceptionally large channel that enter the sea just to the north of National Trust Sandilands (the former Sandilands Golf Course), with a probable offshoot to the present-day Boy Grift Drain outfall. The mouth of this channel is clearly visible as an extremely deep, buried valley, over a kilometre wide, in the geological section of the coast created by David Brew, and this feature has been traced out to sea for some considerable distance too.<sup>161</sup> Inland, the channel that connects with this valley on the Lidar data has borehole records indicating that it retained considerable depth (down to -9.5m OD and deeper)<sup>162</sup> well inland and so is likely to be a very ancient feature of the landscape.

Additional support for the antiquity of this feature comes from the fact that, whilst late prehistoric/Romano-British salterns are very rare north of the southern Lincolnshire Marsh, recent excavations have turned up two saltern sites indicated by briquetage in this map-view, both of which look to be associated with this channel; one could date from either period, but the other was found with Romano-British material and lies just inland along the Boy Grift Drain, with both suggesting that the features visible in the Lidar and geology were likely of landscape significance in the late prehistoric/Romano-British era too.<sup>163</sup> There is some correlation between this feature and the nineteenth-century field boundaries, which is unusual in this area and suggests that a remnant of the creek may have remained a notable feature someway into the medieval period, though at some point the straight Boy Grift Drain, which forms the Huttoft–Sutton parish boundary, was constructed to replace it. The original trunk channel shows a branching drainage pattern with one branch reaching south-westwards between Asserby and Huttoft, where it presumably drained the waters off the surrounding higher land (now replaced by a straightened course of the Boy Grift), and another north-westwards towards Hagnaby, which is indistinct in places but appears on both the Lidar and aerial photographs.

Looking beyond this major channel, there are again a number of minor channels between Mablethorpe and Sandilands, which look very much like saltmarsh creeks; whilst no further modern briquetage finds indicative of salt-making are known, it is worth observing that the creeks around Mablethorpe and Trusthorpe do seem to be associated with Romano-British and some Iron Age finds, which may suggest further salterns perhaps await discovery here.<sup>164</sup> However, in this area, perhaps the most interesting feature is what looks like the very clear

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<sup>159</sup> For example, compare BGS boreholes 506863 and 506862 in Mablethorpe parish.

<sup>160</sup> Based on the boreholes reported by Rackham *et al*, *Triton Knoll*.

<sup>161</sup> Brew, 'Lincolnshire Outmarsh', figs 3 and 6, pp. 24–6; see also Stenton *et al*, *Former Sandilands Golf Club*, p. 19 and fig. 11.

<sup>162</sup> Brew, 'Lincolnshire Outmarsh, boreholes 8 and 9 (fig. 7); BGS borehole 508473.

<sup>163</sup> R. Lopez, *Viking Link UK Onshore Scheme Landscape Zone 1: Archaeological Trial Trench Evaluation Report* (Network Archaeology, 2021), trenches 163 and 262.

<sup>164</sup> These finds are recorded by both the HER and the Portable Antiquities Scheme.



Figure 33: An Early Anglo-Saxon gold disc-pendant of the seventh century. This was found on one of the islands in the coastal marshes in the south of the map-view (Source: Portable Antiquities Scheme, [LIN-7A7C04](#), [CC BY-SA 4.0](#)).

‘trunk’ roddon of a major estuarine river, about 150–200m wide, that starts further north and then follows a sinuous course south through this map-view to the Alford area. Although it has dendritic, saltmarsh channel offshoots, it also seems to carry the waters of the Middle Marsh from Alford to an outfall in Theddlethorpe parish, at what has been identified as the medieval port of Wilgrip, first mentioned in the twelfth century and last seen to function as a port in the sixteenth century (see the next section, below).<sup>165</sup> The Wold Grift Drain that reaches the sea between Mablethorpe and Trusthorpe looks very much like a medieval attempt to redirect this river into a new course, presumably to assist with the de-watering of the landscape here; Owen notes that this channel was certainly in existence and already in need of repairs by *c.* 1357 and again in 1397, when it was known as *Suthgrift/le South Gryft*,<sup>166</sup> and the later issues the port of Wilgrip had with silting up might be partially explained by the redirection of a major component of its fresh-water input that must have originally helped scour the haven there.

Aside from roddons and channels, the other major feature visible on the Lidar of this area are the large islands located within the former saltmarshes. These nowadays present as little more than gentle rises in the landscape of the Outmarsh, but they were clearly once of enormous importance, offering dry land for settlement and agriculture. As noted previously, they consist of glacial till and sand/gravel deposits and site above the maximum height of the marine silts deposited by the repeated inundations of the Outmarsh from the Mesolithic period through to at least the early medieval period, and the Lidar mapping reveals the presence of a significantly large number of these islands than the British Geological Survey include on their maps. Needless to say, there is a strong correlation between the archaeological evidence for human activity in this region and these islands, as Helen Fenwick and others have noted before. Settlement up to the twelfth century AD was almost entirely confined to these islands in the area between Hannah-cum-Hagnaby and Chapel St Leonards, rather than being

<sup>165</sup> A. E. B. Owen, ‘Wilgrip Haven and Theddlethorpe’, *The Lincolnshire Historian* 2.3 (1955), 37–41; P. Hughes, ‘Roger of Howden’s sailing directions for the English coast’, *Historical Research* 85 (2012), 576–96 at p. 589; P. G. Dalché, *Du Yorkshire à L’Inde: une Géographie Urbaine et Maritime de la fin du XIIe Siècle (Roger de Howden?)* (Genève, 2005), p. 175; Pawley, *Lincolnshire Coastal Villages*, pp. 131–2, 137.

<sup>166</sup> Owen, ‘Wilgrip’, p. 38; Owen, *Medieval Lindsey Marsh*, pp. 5–6; A. E. B. Owen, ‘Two Lincolnshire coastal names’, *Journal of the English Place-Name Society* 31 (1998–9), 55–62 at p. 59. Note, in light of the discovery of the trunk roddon that leads to the likely site of Wilgrip from the Alford area, Owen’s subsequent suggestion, in ‘Lincolnshire coastal names’, of the Wold Grift outfall as an alternative location for Wilgrip, due to a superficial similarity of names, can be safely put to one side.



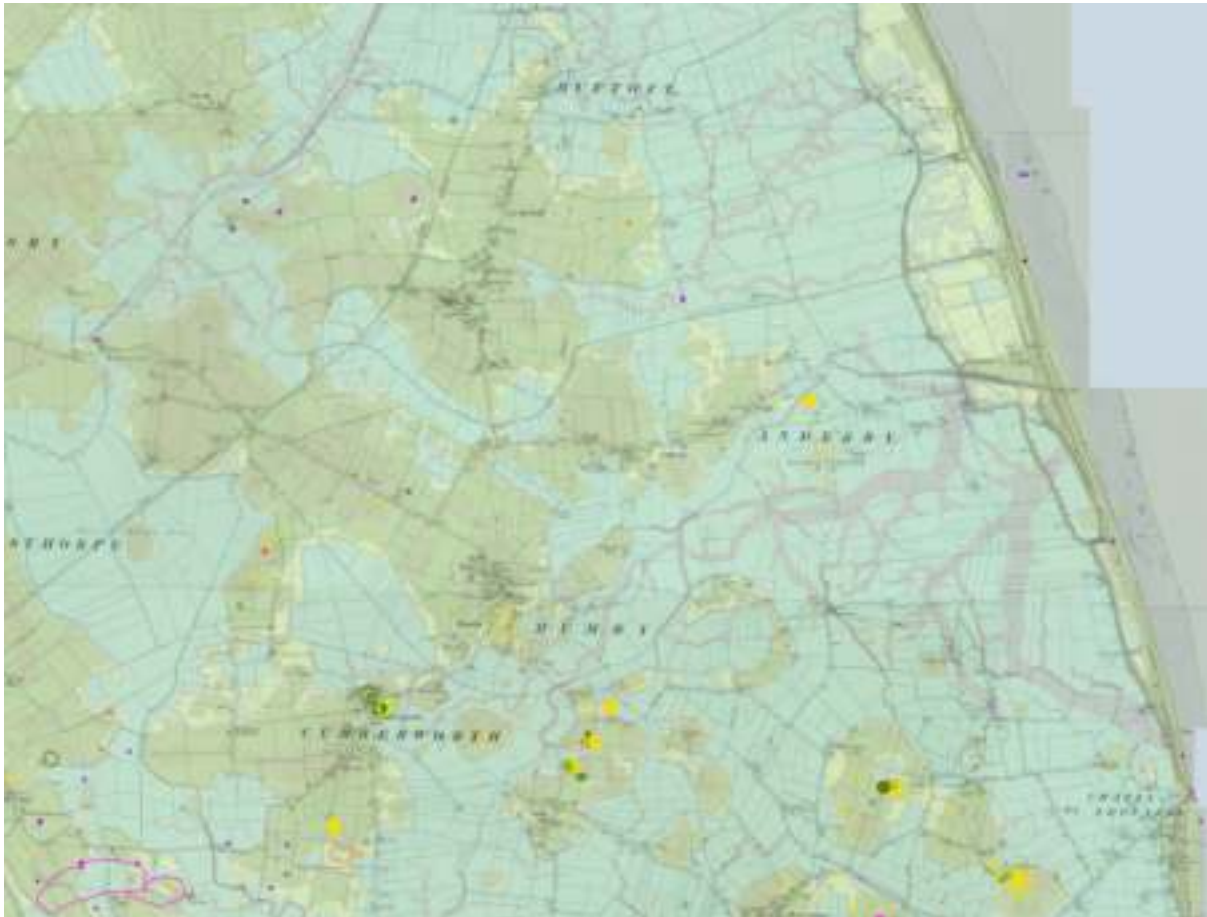


Figure 35: The island-group at Cumberworth–Huttoft, showing all finds from the period up to the late eleventh century AD—dark red: Palaeolithic or Mesolithic; purple: Neolithic; pink: Bronze Age; orange: Iron Age; yellow: Romano-British; shades of green: Early Medieval (light green being the earliest, fifth to seventh centuries). Note, the concentration of finds on the island sites in these areas; the scattering of prehistoric material on the marsh surface and particularly at the coast are probably primarily eroded or dug up from earlier buried land surfaces (the original post-glacial landscape lies only shallowly buried by marine deposits in this part of the study zone, in contrast to the areas to the south and north). The occasional Romano-British finds are of pottery and saltern debris, and two RB salterns have recently been discovered just to the north of this image, whilst the medieval—probably twelfth-century or before—sea-bank that survives in this area can be clearly seen as a raised, sinuous line with higher saltmarsh deposits to seawards.



Figure 34: The islands to the north of Huttoft, showing the major creeks and the two later drainage channels of the Wold Grift and Bay Grift Drains. Note, the line of Boy Grift Drain south of this map can be seen top-left in the previous figure.

found on the alluvial deposits of the Outmarsh proper, as was the case to the south and to the north, presumably because of the ready availability of this drier land in these areas.<sup>167</sup> Moreover, settlement on these islands clearly was of considerable antiquity. On the Cumberworth ‘island’, for example, there are both chance finds indicative of Early and Middle Saxon activity<sup>168</sup> and an excavated mid- to late Anglo-Saxon cemetery that was in turn overlain by a timber church that was probably demolished by the end of the tenth century.<sup>169</sup> Furthermore, the same area has also produced evidence of very late Romano-British activity (including a Late Roman crossbow brooch and a silver coin of Aracadius, struck at Milan in *c.* AD 395–402),<sup>170</sup> as well as finds of Roman coins, metalwork, prehistoric flints and the like, and the same is true to a lesser or greater extent for the other islands too, including Huttoft, Helsey, Mumby and Chapel St Leonards/Hogsthorpe. Indeed, one of the islands close to Chapel St Leonards has produced a particularly impressive collection of Romano-British and Anglo-Saxon material, spanning the full range of these periods, including a wonderful seventh-century AD gold pendant.<sup>171</sup>

The Lidar also shows a distinct area of raised ground seawards of a sinuous sea-bank from Sandilands down to Chapel Point that deserves comment. Owen considers this to be some of the only surviving stretches of medieval, probably pre-mid-twelfth-century sea-bank along the Lindsey coast and to be identical with the *Havedic* or *Hafdic* (‘sea-bank’) recorded in medieval documents from this area.<sup>172</sup> To the north of National Trust Sandilands and the south of Chapel Point, the medieval sea-bank seems to have been lost in the great erosive episodes of the thirteenth century onwards,<sup>173</sup> as is discussed in the next map-view, but here he believes it survives. Certainly, it has the look of a medieval sea-bank, with its sinuous course, and it may have followed and embanked several former minor channels, as Owen suggests (whilst cutting off the main creeks, as can be seen on Lidar).<sup>174</sup> Needless



Figure 36: The area from Sandilands to Chapel Point on Bryant's *Map of Lincolnshire* of 1828, showing the surviving remnants of the medieval sea-banks here (labelled 'County Bank' and 'Huttoft Bank'), the area of saltmarsh that existed to the east of the Huttoft Bank, and the line of the 'Buoy Grift' (the original trunk creek flowed slightly to the north of this). The map also shows a never-constructed but proposed Alford Navigation (Source: Daniel Crouch Rare Books).

<sup>167</sup> Fenwick, *Lincolnshire Marsh*, chapter 8; she notes that, for the area between Maltby le Marsh and Addlethorpe, by the twelfth century the 'islands within the Outmarsh [were] occupied, but no settlements [had been] developed on the area of alluvial deposits'.

<sup>168</sup> Portable Antiquities Scheme LIN-6D0CE4 (a silver coin of *c.* 680–710); LIN-1424E9 (a fifth- or sixth-century sleeve-clasp).

<sup>169</sup> Lincolnshire HER MLI81931 and MLI41986.

<sup>170</sup> Portable Antiquities Scheme LIN-6883D7 and LIN-725431.

<sup>171</sup> This material is all recorded via the Portable Antiquities Scheme and does not feature in the HER, though given the quantity of material it would be worth recording here too; the gold pendant is PAS LIN-7A7C04.

<sup>172</sup> Owen, 'Hafdic', pp. 51, 54.

<sup>173</sup> Robinson, *Lincolnshire Seaside*, pp. 19 – 22; Owen, 'Coastal erosion' and A. E. B. Owen, 'The upkeep of the Lindsey sea-defences, 1550–1650', *Lincolnshire Historian* 2 (10) (1963), 23–30.

<sup>174</sup> Owen, 'Salt, sea banks', p. 47, and perhaps see fig. 36 for some support, as it shows a northern branch of the Anderby creek running across the saltmarsh here just to the east of the sea bank? For a sceptical view of Owen's suggestion, see M. Gardiner, 'Archaeological evidence for the exploitation, reclamation and flooding of salt marshes', in J. Klapste (ed.), *Ruralia V: Water Use and Management in Europe* (Prague, 2005), 73–83 at p. 78.



Figure 37: Mablethorpe High Street in the early twentieth century, showing the Book in Hand inn, one of the original eighteenth-century bathing inns that helped create the modern-day resort coast of Lincolnshire; the town of Mablethorpe arguably grew up around this inn. The modern Book in Hand looks rather different to this, due to alterations, division and fire damage.

to say, if this sea-bank is ever excavated properly and its construction dated, then this should give us a date after which the saltmarsh creeks on Lidar cannot have existed; for the moment, however, we can only say that at least some of the sea-banks built along the coast here to protect it from regular flooding are likely to pre-date the twelfth century, given that Sutton, Trusthorpe and Mablethorpe were all founded on the far eastern edge of the Outmarsh by the mid-eleventh century.<sup>175</sup> As to the raised saltmarsh beyond the surviving bank from Sandilands to Chapel Point, it can be noted that this is likely to be much smaller than it once was—it has been calculated that the saltmarshes left unenclosed beyond it in the early thirteenth century must have been about one mile wide, whereas now they have a maximum width of only half this and a minimum width of only a couple of hundred metres. The ‘missing’ saltmarshes here were presumably taken by the sea during the ‘stormy centuries’, along with the rest of the east coast sea-bank, something supported by the scientific dating of the dunes that now face the sea at Moggs Eye to *c.* 750 years old.<sup>176</sup>

Finally, the modern development of the coastline here has left very clear traces on both the Lidar data and the wider landscape. Starting in the late eighteenth century with a fashionable bathing inn, the Book in Hand, at Mablethorpe and another, the Bacchus, at Sutton-in-the-Marsh (Sutton on Sea), this part of the coast became increasingly popular with those wishing to visit the sea-shore.<sup>177</sup> The Book in Hand, first recorded in 1792, appears to have been the seed around which a small bathing resort had grown up at Mablethorpe by the mid-nineteenth century, with over 120 visitors resident in July 1855 and 4,000 ‘pleasure-seekers’ descending on the

<sup>175</sup> Foster and Longley, *Lincolnshire Domesday*, pp. 27, 73, 74, 112, 136, 161, 201, 209.

<sup>176</sup> Clarke and Rendell, ‘Luminescence dating of Holocene sediments at the land-ocean interface’; A. E. B. Owen, ‘Beyond the sea bank: sheep on the Huttoft Outmarsh in the early thirteenth century’, *Lincolnshire History and Archaeology* 28 (1993), 39–41 at p. 41.

<sup>177</sup> I have been able to trace the Mablethorpe Hotel, aka The Book in Hand, and the Sutton House/Jolly Bacchus back to at least 1792 in the Lindsey Quarter Sessions alehouse recognizances (Lincolnshire Archives LQS/D/9/1/5/2 and LQS/D/9/1/5/4) and local newspaper reports, for example *Stamford Mercury*, 30 August 1793, p. 1, and 22 May 1807, p. 3.

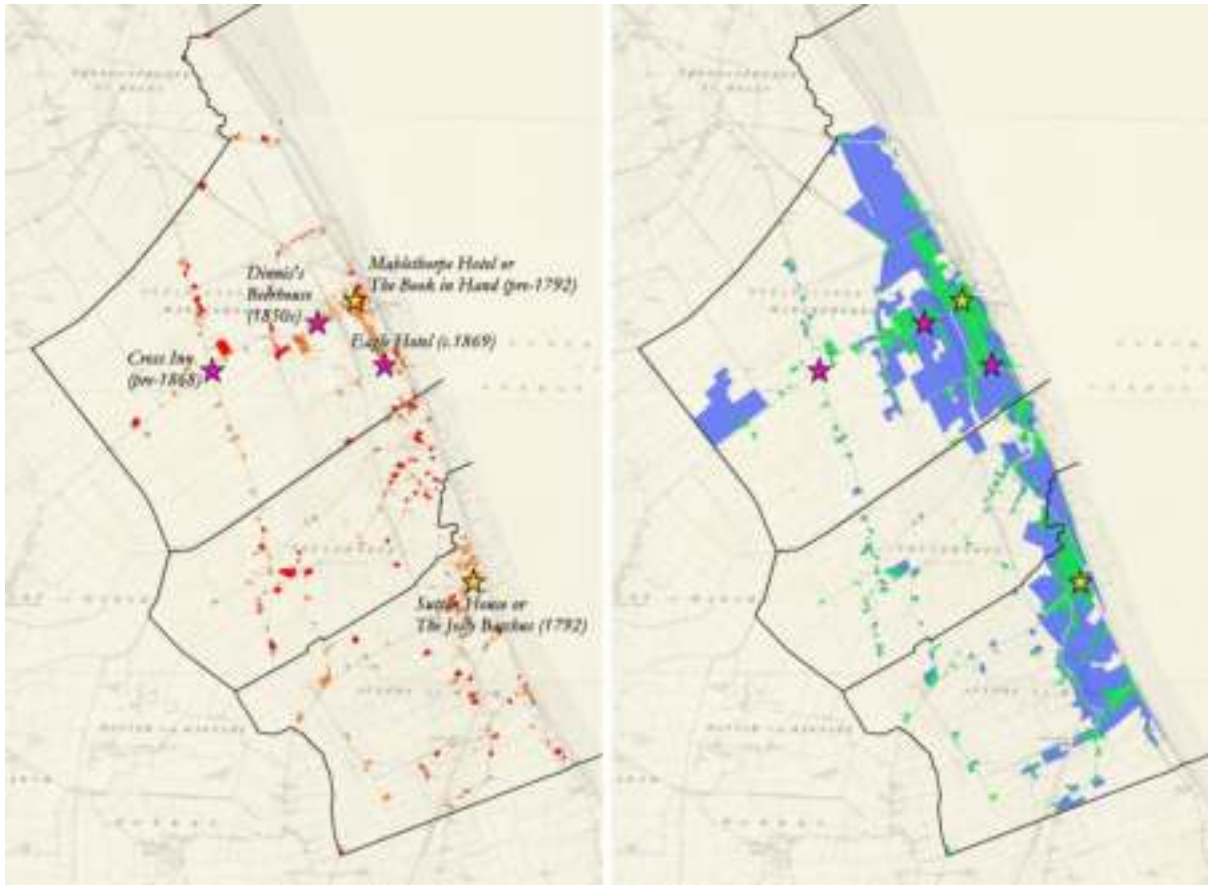


Figure 38: Two maps of the growth of Mablethorpe—(a) a map showing the locations of the nineteenth-century inns and pubs of the area, alongside areas of activity by the 1820s (red) and the extent of Mablethorpe at the end of the nineteenth century (orange). Note, Mablethorpe and the two parishes to the south, Trusthorpe and Sutton, originally had a very dispersed settlement pattern, something that perhaps reflects their origins as settlements situated directly on the Outmarsh, unlike the island settlements further south. By the end of the nineteenth century, this had started to change, but nowhere near so much as it did in the Skegness area; nonetheless, the beginnings of the town as a resort settlement growing around the seed of Book in Hand seems fairly clear, as it the growth of Sutton around the Jolly Bacchus. (b) Mablethorpe in the 1950s (green) and the 2020s (blue, including caravan parks), showing how the growth of a coastal resort strip along this stretch of coast had got well underway in the first half of the twentieth centuries, but was only fully consolidated after c. 1950. The base map is the OS Six Inch maps of 1907, National Library of Scotland.

place in a single day in August 1871. After Mablethorpe obtained a railway in 1877, it saw a significant surge in development as a result of ‘day-tripping’ visitors, notably between the station and the beach, although it grew noticeably more slowly than the other two new ‘resort towns’ of the coast—Cleethorpes and Skegness—and was never as popular, especially for permanent residence. Indeed, whilst it gained urban status in the 1890s and was locally significant, it still had less than 1,000 permanent inhabitants by 1901, and only merged with Trusthorpe and Sutton—which was maintained as the quieter, more genteel area of this resort coast—in 1925.<sup>178</sup>

Before leaving the Chapel Point to Mablethorpe area, mention ought to be made of the ‘sunken forest’ that has been frequently encountered off the Lincolnshire coast, primarily between Mablethorpe and Wolla Bank, north of Chapel Point. The tree stumps, trunks and branches that are revealed by very low tides here have their origins in a drowned prehistoric forest that not only once covered the buried glacial landscape that underlies the Outmarsh, but also stretched out over what is now the floor of the North Sea after the end of the last Ice Age, when global sea-levels were sufficiently low to make this dry land. As the glaciers melted, sea-levels rose again,

<sup>178</sup> See Robinson, *Lincolnshire Seaside*, pp. 56–7, 84–5 on the development of Mablethorpe, and also Neller, ‘Skegness, Mablethorpe and Cleethorpes’, who notes that the contrast between Sutton and its ‘rowdier’ northern neighbour was deliberately maintained by the local council, as it provided the perfect foil for the latter.



Figure 39: The start of the flooding of Doggerland, show the area that was still dry land around 10,000 years ago versus that which remained dry land 9,000 years ago. The tides start to impinge on the current coastal zone from Boston to Grimsby around 8,000 years ago—see the concluding section for phased reconstructions of this flooding along the Lincolnshire Marsh (Source: modified from J. Walker *et al*, ‘A great wave: the Storegga tsunami and the end of Doggerland?’, *Antiquity* 94 (2020), 1409–25, fig. 2, made available under a [CC BY](#) licence).

gradually flooding the great lowland plain of the North Sea basin, now usually known as Doggerland,<sup>179</sup> until the waters started to impinge on both the Fenland and the Outmarsh from about 6000 BC.<sup>180</sup> This had the effect of gradually transforming eastern Lincolnshire from an upland, forested zone into a gradually flooding landscape of shallow valleys and hills, and then a wide coastal landscape of marshes, creeks and islands, with the original Mesolithic landscape of this area being consequently buried below metres of marine sands, silts and clay. At sites like Wolla Bank, near the North Sea Observatory at Chapel St Leonards, the lowest tides expose the eroded fragments of this old land surface, which can only usually be encountered inland through boreholes or excavations—fallen trees, branches and stumps are found here, lying in a thin peat that formed over the ancient soil as the rising tides waterlogged the forest.<sup>181</sup> Analysis of this suggests that the forest at Wolla Bank



Figure 40: An earlier twentieth-century postcard showing the extent of the submerged forest then visible at Mablethorpe; more recent exposures of the forest here have been generally less dramatic.

<sup>179</sup> On Doggerland, see for example B. J. Coles, ‘Doggerland: a speculative survey’, *Proceedings of the Prehistoric Society* 64 (1998), 45–81; V. Gaffney *et al*, *Europe’s Lost World, the Rediscovery of Doggerland* (London, 2009); and J. Walker *et al*, ‘A great wave: the Storegga tsunami and the end of Doggerland?’, *Antiquity* 94 (2020), 1409–25.

<sup>180</sup> See, for example, at Theddlethorpe, where saltmarsh began to form around 6100 BC: Shennan *et al*, ‘North Sea palaeogeographies’, p. 312, and Stenton *et al*, *Former Sandilands Golf Club*, p. 14; D. S. Brew *et al*, ‘Holocene sea-level history and the coastal evolution of the north-western Fenland, eastern England’, *Proceedings of the Geologists’ Association* 126 (2015), 72–85; the palaeogeographic maps presented below in fig. 92; and Section 3.1.

<sup>181</sup> See D. N. Robinson, ‘The buried forest of Lincolnshire’, in N. Field and A. White (ed.) *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 6–10 for a good general account of the submerged and buried forests of this region.

was, for example, a mixed deciduous woodland that transitioned to alder carr as water levels rose, before the land was finally submerged in the Neolithic period, around 3200 BC or so, although at Chapel Point the inundation came a little later.<sup>182</sup>

Needless to say, the coastal exposures of such forests have intrigued visitors to this coastline for hundreds of years. One of the earliest accounts of it comes from 1796, when the Portuguese abbot and scientist Joseph Correa de Serra was taken to see the forest by Sir Joseph Banks of Revesby. Visible only at the lowest tides, he records that a ‘submarine forest’ of mainly birch, fir and oak trees was preserved atop a large number of clay islets that ‘extend at least twelve miles in length, and about a mile in breadth, opposite to Sutton shore’. De Serra goes on to say that the summits of the islets were made up of decayed trees, some of which were ‘still standing on their roots’, although the trunks of the majority lay scattered on the ground. He notes further that while the timber was decomposed and soft, the bark of the trees and some of the leaves (notably that of holly) were found to be perfect and as fresh as when they were growing!<sup>183</sup> Unfortunately, these easily accessible coastal fragments of the pre-flood landscape of the Lincolnshire coast are increasingly under threat. When De Serra reported on them, the outcrops of clay and forest were of enormous extent at low-tide, something confirmed by Robert Mitchell’s 1765 coastal sailing chart of Lincolnshire, where the forest ‘islets’ are marked as a wide belt of ‘Clay



Figure 41: A tree trunk from the drowned prehistoric forest that once covered the Outmarsh and stretched out into the North Sea, now visible at very low tides on the beach at Wolla Bank, along with its surrounding peat bed.

<sup>182</sup> Derrett and Selby, *Lincolnshire Coast Submerged Landscape*; see also A. J. Clapham, *The Characterisation of Two Mid-Holocene Submerged Forests* (Liverpool John Moores University PhD Thesis, 1999) and Stenton *et al*, *Sandilands Golf Course*, pp. 14–15; note, uncalibrated dates are calibrated using IntCal20 and Calib 8.20, and there are several radiocarbon dates from Anderby/Wolla Bank, which vary slightly—the rough dating offered here follows Derrett and Selby’s preferred date (pp. 9 [Table 1], 10, 12, 39 [Table 2], 41, 42). Differences in the dates of initial inundation along the coast are, of course, to be expected: the underlying Mesolithic land-surface was a hummocky landscape of low hills and valleys that flooded over the course of several thousands of years as the sea-level rose; in consequence, the forest that covered it was waterlogged and killed at varying dates depending on how high the land it stood on was, irrespective of any more local factors that might affect tide heights and the like—see further below.

<sup>183</sup> J. C. de Serra, ‘On a submarine forest, on the east coast of England’, *Philosophical Transactions of the Royal Society of London* 89 (1799), 145–56.

Huts' between Sutton and Anderby Creek.<sup>184</sup> By the 1920s, however, this width seems to have declined to only about 150 yards, and by the 1990s the width of the visible forest fragments are recorded as being only around a third of this.<sup>185</sup> Nowadays, often only a few small sections of ancient land surface are exposed by the lowest tides—for example, during an exceptionally low tide at Trusthorpe in 2018, just two lone stumps appeared above the sea, a vast change from previously recorded experience, although a substantial chunk of peat bed and forest is still regularly visible at Wolla Bank. This can in part be explained by recent beach replenishment works covering up some of the forest deposits and recent increases in mean sea-level, but it is likely that erosion over time also plays a very significant role, particularly as a significant amount of decline was noted prior to the modern beach replenishment works.

That this ancient, drowned forest was, incidentally, not a phenomenon restricted solely to the current coastline can be shown from a number of boreholes, wells and brick quarries inland that reveal similar preserved 'forest beds' and trees buried under metres of marine deposits, although we do need to remember that some of these reflect later woodland regrowth on top of marine sediments during periods where sea-level was temporarily lower. In Hogsthorpe parish, for example, the trunks of large oak trees are found around 2m below the current land surface, lying on a peat that rests on the pre-inundation surface and beneath a thick clay that is said to contain 'cockle shells in abundance'.<sup>186</sup> In contrast, at Thorpe St Peter, near Wainfleet, there are two layers of trees, one located just less than 2m below the surface and another 3m further down beneath a shell-filled clay and resting on the original land surface.<sup>187</sup> At the coast between Mablethorpe and Chapel Point, and also at Cleethorpes,<sup>188</sup> the erosion of the overlying marine sediments simply exposes these ancient submerged forests to easy view, as the underlying land surface lies at around low-tide level. It is probably for a similar reason that beach exposures of the forest seem to be absent both to the north of Mablethorpe and in the Skegness area—here, the Mesolithic land surface was much lower and flooded much earlier,<sup>189</sup> so that the lowest tides therefore never get low enough (and thus cut down through enough later sediment) to expose it to view.

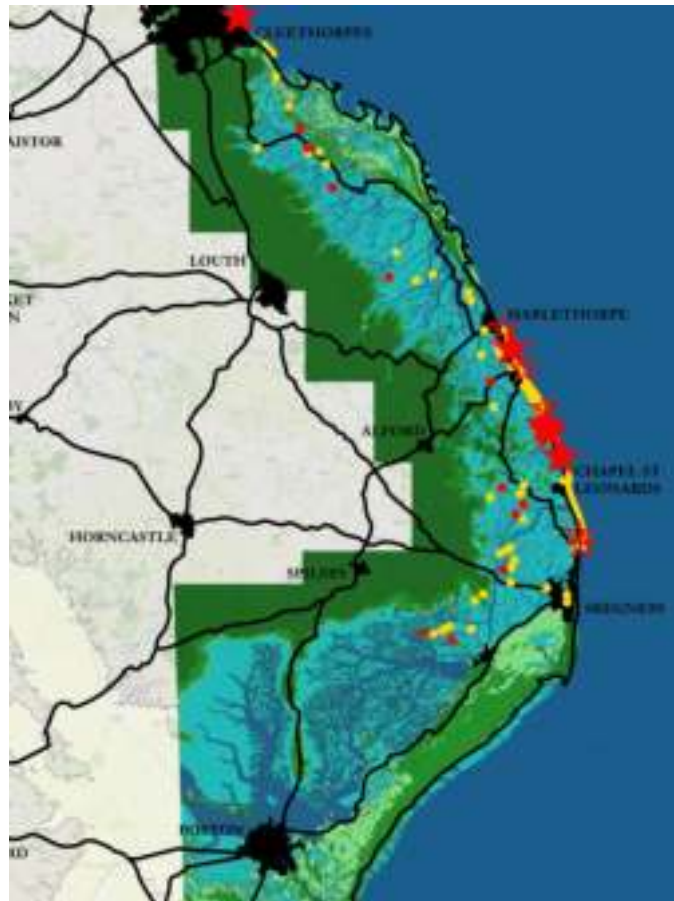


Figure 42: Map of the Lincolnshire Outmarsh area, showing where buried forests (red) and initial inundation basal peats (yellow) have been found; stars are recorded coastal exposures (open where not currently visible), dots are inland finds, and the yellow line denotes the coast where peat is often found (Modern map © OpenStreetMap contributors, Open Database Licence).

<sup>184</sup> Reprinted in Robinson, *Lincolnshire Seaside*, p. 51; see also C. Smith, *New Map of the County of Lincoln* (1804).

<sup>185</sup> See Clapham, *Mid-Holocene Submerged Forests*, pp. 62–4, and Robinson, 'Buried forest of Lincolnshire', pp. 7, 9.

<sup>186</sup> Jukes-Browne, *Geology of Part of East Lincolnshire*, p. 107.

<sup>187</sup> Jukes-Browne, *Geology of Part of East Lincolnshire*, p. 105.

<sup>188</sup> K. Leahy, 'A dated stone axe-hammer from Cleethorpes, South Humberside', *Proceedings of the Prehistoric Society* 52 (1986), 143–152

<sup>189</sup> Around -10.95m OD at Theddlethorpe, where the initial marine flooding has been dated to the Mesolithic era, 6114–6006 cal BC: Stenton *et al*, *Sandilands Golf Course*, p. 14.

### 3 The Lincolnshire Marsh from Mablethorpe to North Somercotes

This map shows an area that must have been inundated by the sea from the Mesolithic era onward and in which huge roddons are visible, often linked to the major drainage networks of the dry Middle Marsh. Key points relating to the evidence from this map-view include the following.

- It is easier to trace the major channels on the Lidar of this area, in part because they are not only large and extremely well-defined, but there is also slightly more variation in surface elevation compared to the zone immediately to the south of Mablethorpe. Indeed, the channels from Saltfleetby southwards are reasonably easily visible on even the standardised colour ramp. Those further north associated with the Lud drainage system do require more adjustment of the colour ramps and elevations to be brought out, however, and the pattern can be hard to discern, although the presence of well-defined down-cutting ‘final channels’ is helpful here.
- Aerial photography from both historic collections and the Google Earth dataset proved somewhat useful in this map-view, but there were again far fewer useable images than in the southern Lincolnshire Marsh in the Google Earth collection.
- There is a variable correlation between the recorded nineteenth-century field and parish boundaries and Lidar features. Whilst there are many long, straight-sided fields (‘long lands’ or ‘dales’)—which are believed to have been created as subdivisions of common wetlands<sup>190</sup> from at least the eleventh century and through the medieval period—there are also sinuous elements, and the blocks of ‘long lands’ seem to reflect the underlying pattern of roddons in the Theddlethorpe area. Equally, the field and parish boundaries do retain significant sinuous elements in some areas, particularly north of Saltfleetby (where the largest, most regular blocks of ‘long lands’ are found, see fig. 3). All of this suggests that, aside from in the Saltfleetby area, the pre-existing creeks and channels did continue to play a role into at least the early part of the medieval period.
- Geological data is of considerable interest in this area. In much of the area within a few kilometres of the current coastline, the underlying glacial till (the pre-drowning Mesolithic land surface) is buried under more than ten metres of marine silts, sands and clays. Inland, towards the Middle Marsh, this depth of sediment decreases relatively markedly, as it also does in the area of North Somercotes; indeed, the British Geological Survey and the Lincolnshire HER both show areas in North Somercotes parish where the glacial till is at or very close to the surface, forming small ‘islands’ in the coastal marshes here.<sup>191</sup> The northern part of the map-view also falls within the area covered by N. G. Berridge and J. Pattison’s *Geology of the Country Around Grimsby and Patrington*, which offers a useful reconstruction of the underlying pre-inundation geology, showing a persistent sand body from the early prehistoric era at North Somercotes that was perhaps anchored by these islands of till.<sup>192</sup>

As before, there is little evidence for multiple periods of overlapping channels on the Lincolnshire Outmarsh, with the pattern we see very probably representing a single system in operation in the early medieval period, *i.e.*, after the last major marine inundation of the Late/post-Roman era. Certainly, finds of Romano-British cultural material indicative of occupation or activity in a possibly slightly drier period, rendering small areas of the

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<sup>190</sup> Gardiner, ‘Dales, long lands’.

<sup>191</sup> British Geological Survey, *Geology Viewer*, <https://geologyviewer.bgs.ac.uk/> at approximately TF406973; Lincolnshire HER ELI1482; N. Field and G. Tann, *Church Farmhouse, Church End, North Somercotes, Lincs.: Archaeological Watching Brief* (Lindsey Archaeological Services, 2000), pp. 1, 3.

<sup>192</sup> N. G. Berridge and J. Pattison, *Geology of the Country Around Grimsby and Patrington* (London, 1994), pp. 63–4.



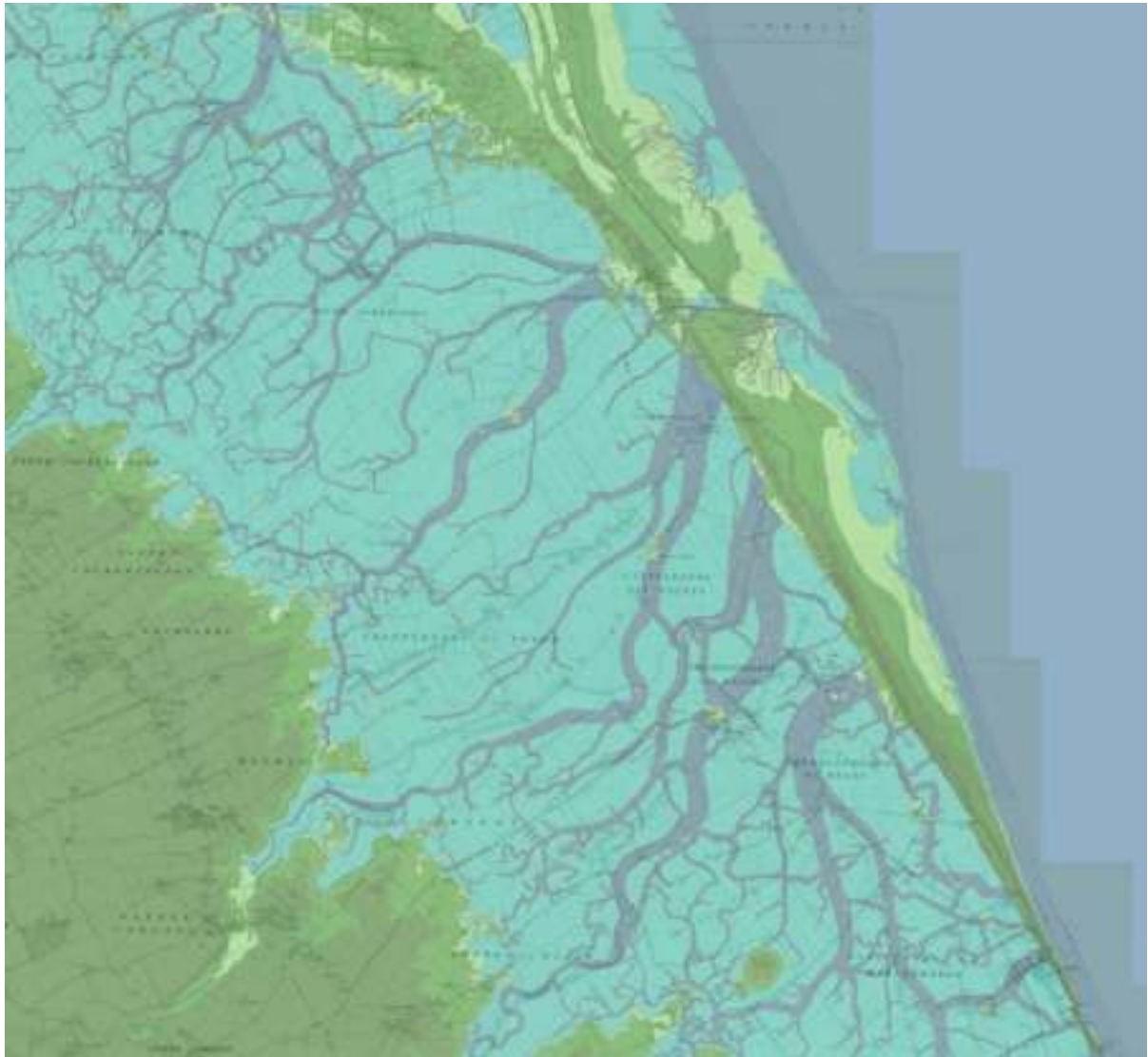


Figure 43: Reconstruction of the channel systems in place in the northern Lincolnshire Marsh around Saltfleet and Theddlethorpe, based on Lidar data, aerial photographs and other sources as set out in the main text.

Outmarsh suitable for building, are found buried under thick layers of marine sediments that must have been deposited in this era. At Howdales, South Cockerington, third-century AD activity and finds are buried under 0.5 to 1m of Late/post-Roman marine deposits, whilst at Scupholme and Saltfleetby St Peter evidence of significant and relatively high-status activity was found beneath 1.5–3m of later sediments, though in both cases it seems likely this depth was increased by the finds being contemporaneously dumped in nearby shallow creeks.<sup>193</sup> The only exception to this suggestion of a single system of creeks located significantly above the pre-medieval surface is in the area north-east of Stain Hill, in Theddlethorpe St Helen parish, and perhaps the very complex pattern of channels seen around South Somercotes, where the pattern seems hard to fully disentangle, but the evidence is not wholly clear here and it probably represents simply varying channels within a single early medieval system.

On the whole, the map-view can be divided into two. In the area south of Saltfleet, the low-lying marsh—generally located between 1.3 and 2.3m OD—shows a very clear pattern of huge, sinuous channels generally

<sup>193</sup> See Lincolnshire HER records MLI88125, MLI89352, and MLI41294, along with the associated grey literature reports, Northern Archaeological Associates, *Saltfleetby Gas Storage Project, Lincolnshire: Grayfleet Gas Storage Facility: Archaeological Trial Trenching Report* (2006), and Heritage Trust of Lincolnshire, *Notes on a site visit to Saltfleetby St. Peter, July 2003* (2003).

flowing in a north/north-easterly direction. Indeed, the area from just south of Saltfleet down almost to Oliver's gap forms, in effect, one enormous roddon around 3km wide, although minor adjustment of the colour ramps and their limits in a GIS program allows one to distinguish several large, interweaving, sinuous channels. The northernmost of these, which clearly emptied into the sea at the same spot as the channels that fed Saltfleet Haven, has a number of traceable tributary roddons, the most significant of which looks like it originally carried the waters of the Long Eau from Little Carlton and Legbourne. These waters had been diverted to join those of the Great Eau or Withern Eau at some point in the medieval period, but initially at least it had a separate roddon and mouth. Indeed, it seems very likely that the pre-Viking 'island' settlement of Little Carlton, recently excavated on the very edge of the Middle Marsh and found to have been a rich Middle Saxon settlement with a small wharf running out from the pre-Viking shoreline here, was connect to the sea by this roddon system.<sup>194</sup> This roddon subsequently runs past a small amount of higher ground by the church of Saltfleetby All Saints on its way to the sea; this latter church possibly sits on an isolated glacial till island here,<sup>195</sup> and the higher area of ground visible on Lidar may represent this till island and/or medieval saltern mounds making use of the creek here, which may explain how the higher ground overlaps the roddon (cf. the saltern mounds found on the edge of the Schalflet in the southern Lincolnshire Marsh).

The other major trunk roddon entered the sea on the Saltfleetby–Theddlethorpe parish boundary at a site known in the immediate post-medieval period as Balack Haven.<sup>196</sup> It too was of impressive width, over 500m, and clearly carried the water of the Great or Withern Eau to the sea, a role it is likely to have played for some considerable time, as its mouth is clearly visible in a series of seismic readings taken along the coast here, showing a clear, wide depression filled with sand that reached down to around about 12

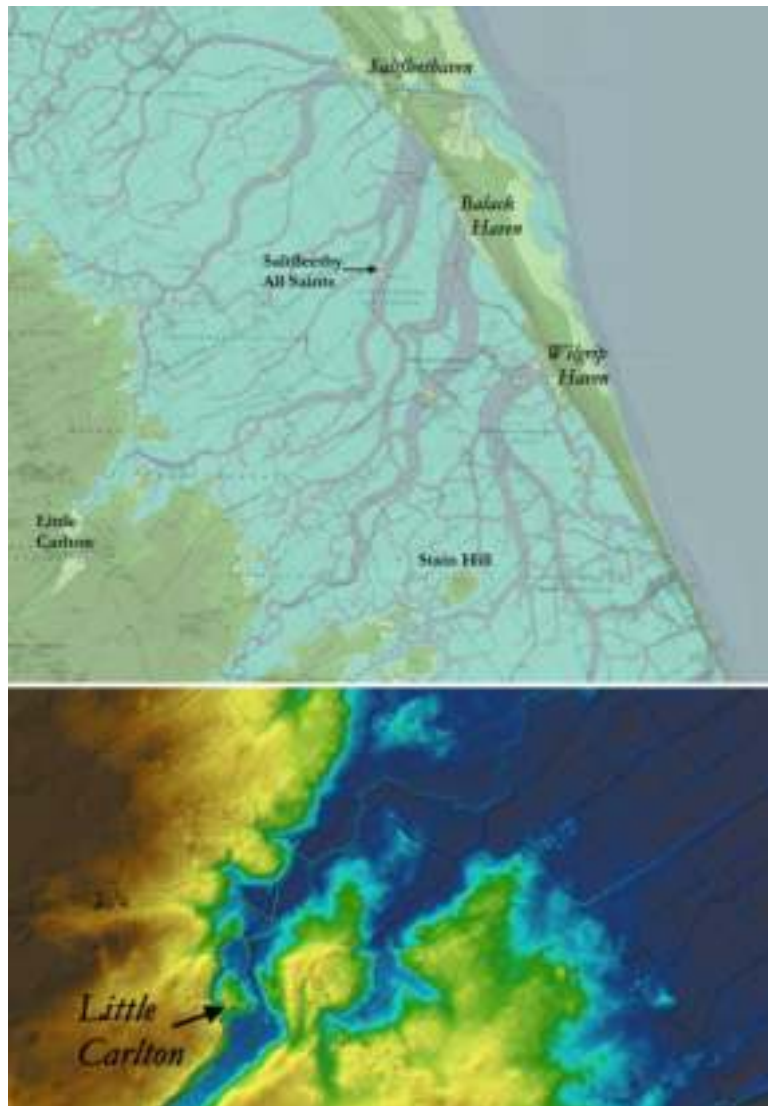


Figure 44: (a) Location of the major havens and key sites; (b) Lidar map adjusted to show the 'island'-like situation of the Middle Saxon site at Little Carlton, rather than the roddons; this sat right at the edge of the coastal zone and had a small wharf.

<sup>194</sup> For the site, see C. Green, *Britons and Anglo-Saxons: Lincolnshire AD 400–650*, second edition (Lincoln, 2020), pp. xlvii–xlix; H. Wilmott and D. W. Wright, 'Rethinking early medieval "productive sites": wealth, trade and tradition at Little Carlton, East Lindsey', *Antiquaries Journal* 101 (2021), 181–212; P. Townend *et al.*, 'The mystery in the marsh: exploring an Anglo-Saxon island at Little Carlton', *Current Archaeology*, 313 (2016), 28–34.

<sup>195</sup> K. Wragg, *All Saints Church, Saltfleetby, Lincolnshire: Archaeological Watching Brief* (CLAU, 1999), pp. 4–5, fig. 5.

<sup>196</sup> Owen, 'Wilgrip', p. 39, who notes its appearance in a document of 1607; G. Weaver, 'Historical outfalls of the River Great Eau', *Lincolnshire Naturalist* 25.1 (2000), 26–7.

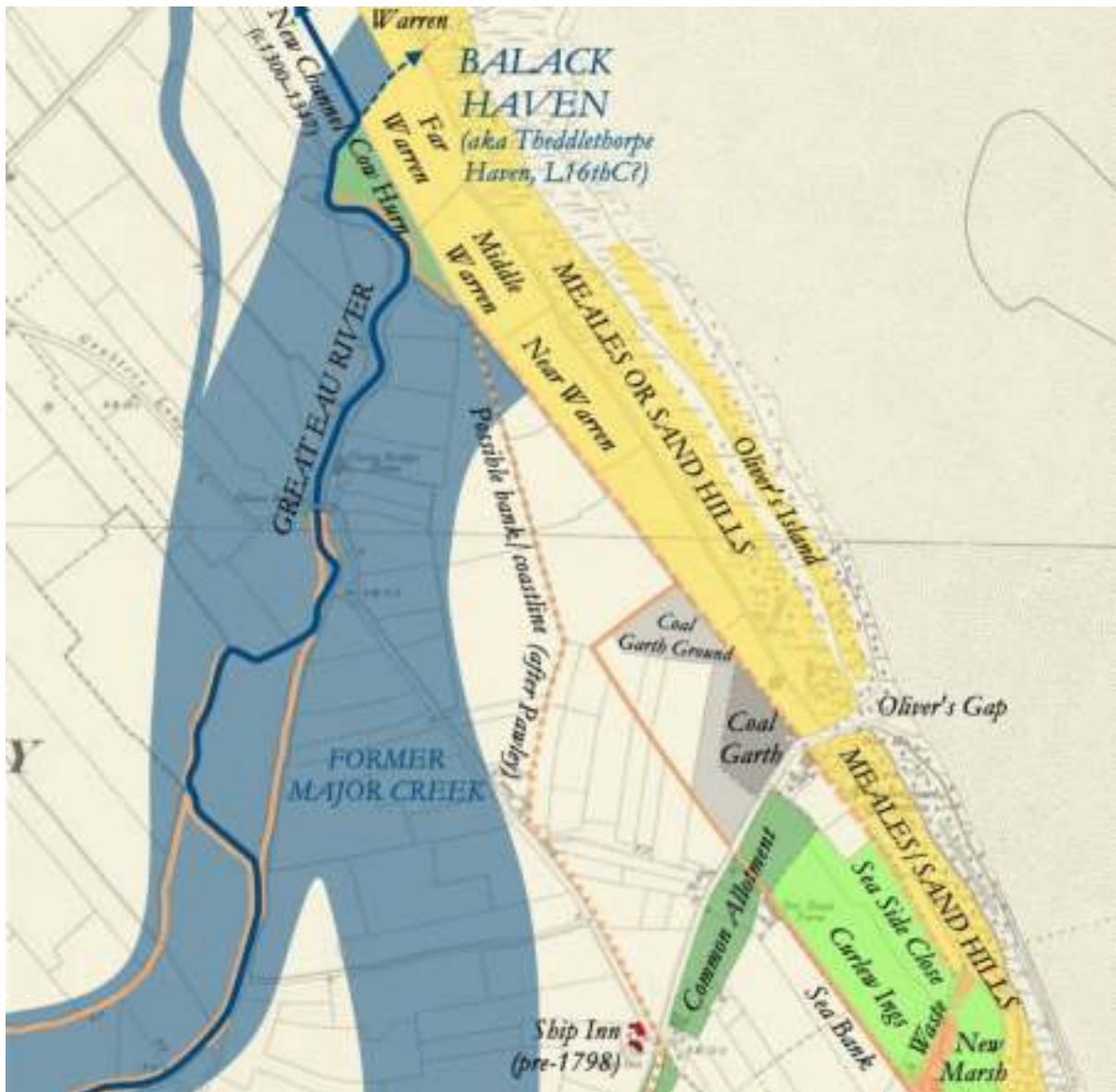


Figure 45: The landscape around the mouth of the Great Eau roddon, showing the current course (probably a ‘final channel’ through almost to Balack Haven, where it was diverted northwards in the fourteenth century to scour Saltfleet Haven, with banks (orange lines) and field-names from the Tithe Award also shown. In the modern era, Oliver’s Gap played a role as both a trading site—see the large coal garth, for example—and a site for small-scale smuggling, sitting at the seaward end of an interestingly long and thin area of ‘Common Allotment’ (Map Source: OS Six Inch 1907, National Library of Scotland).

metres below ground level, indicating that a major river had flowed here since early in the prehistoric era.<sup>197</sup> Quite when these two major creek systems ceased to function is, unfortunately, unclear. The Great Eau was clearly constrained to something like its present channel prior to the early fourteenth century, as at that point its flow was redirected from Balack Haven to Saltfleet Haven in order to scour this major Lincolnshire coastal port, though Balack Haven remained open for a period.<sup>198</sup> Archaeological finds, recorded primarily by the Portable

<sup>197</sup> Weaver, ‘Historical outfalls’.

<sup>198</sup> A. E. B. Owen, ‘The early history of Saltfleet Haven’, *Lincolnshire Architectural and Archaeological Society Reports and Papers* 5.2 (1954), 87–100 at pp. 98–100; Pawley, *Lincolnshire Coastal Villages*, pp. 142, 321–22, who also notes the existence of a ‘Theddlethorpe Haven’ in 1582 and a little after—was this another name for Balack Haven? Certainly, the late sixteenth-century ‘Theddlethorpe Haven’ seems to have been located to the north of Wilgrip (Pawley, p. 61, and S. Pawley, ‘Maritime trade and fishing, 1500–1700’, in S. Bennett & N. Bennett (eds), *An Historical Atlas of Lincolnshire* (Hull, 1993), p. 59) and Wilgrip was indeed located just to the south of Balack Haven. If Balack Haven was the late sixteenth-century Theddlethorpe Haven, then it was relatively short-

Antiquities Scheme, but also in some cases by the HER, offers further elucidation. Early medieval, *i.e.* pre-Norman, finds from around the interweaving channels include a farmstead discovered close to the roddon at Theddlethorpe All Saints, which was occupied either in late ninth to tenth centuries or the eleventh/twelfth centuries, depending on the dating of the pottery, and a variety of finds from Saltfleetby and Theddlethorpe, such as an important, eleventh-century lead spindle whorl that has runes referring to Odin.<sup>199</sup> They also include a small number of finds from atop the roddon associated with the Long Eau in the area of Saltfleetby St Clement, almost all of which date from the Anglo-Scandinavian/Late Saxon era aside from one that could date from the ninth century and be Middle Saxon, but could well date from the tenth century.<sup>200</sup>

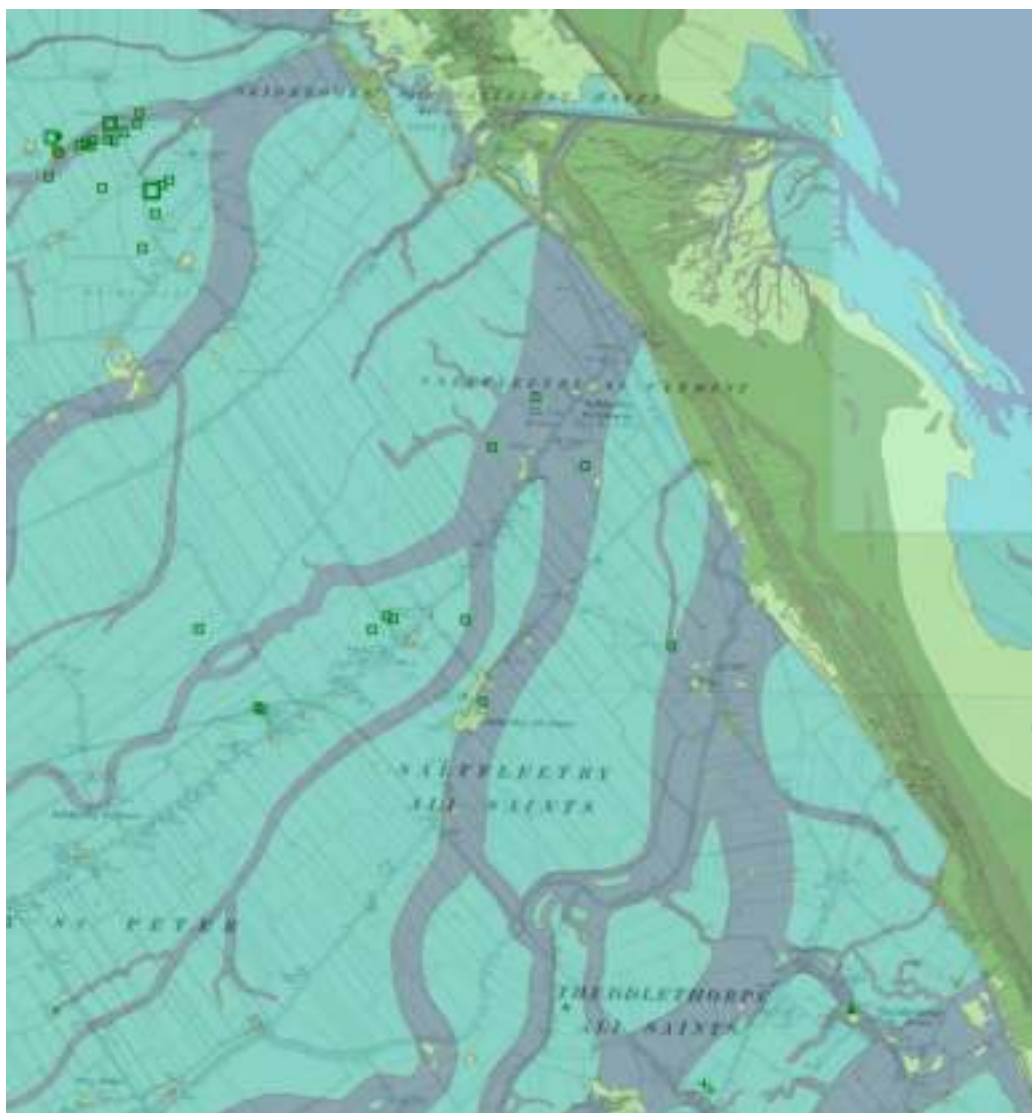


Figure 46: Map of the Skidbrooke to Theddlethorpe area showing the distribution of early medieval (pre-1100) finds; see text for analysis of what this shows; the underlying map also clearly illustrates the medieval ‘long lands’ here.

lived as this, as by 1759 the name ‘Theddlethorpe Haven’ had become associated with a site just to the south of the main mouth of the Alford–Wilgrip roddon, see below.

<sup>199</sup> M. Allen and G. Tann, *Saltfleetby Pipeline: Howdales, South Cockerington – Theddlethorpe Gas Terminal: Archaeological Watching Brief and Excavation* (Lindsey Archaeological Services, 2000); Lincolnshire HER MLI80963; Portable Antiquities Scheme LIN-D92A22; J. Hines, ‘A glimpse of the heathen Norse in Lincolnshire’, in E. Cambridge and J. Hawkes (eds), *Crossing Boundaries. Interdisciplinary approaches to the art, material culture, language and literature of the early medieval world* (Oxford, 2017), pp. 118–26, though see J. Jesch, ‘Further thoughts on E18 Saltfleetby’, *Futhark: International Journal of Runic Studies* 9–10 (2018–19), 201–13, for a suggested redating to the twelfth century.

<sup>200</sup> Portable Antiquities Scheme LIN-42F813 (a strap end dated 800–1000).



Figure 47: An arguably eleventh-century lead spindle whorl with runes referring to Odin and Heimdall, found in Saltfleetby St Peter parish (Source: Portable Antiquities Scheme [LIN-D92A22](#), [CC BY-SA 4.0](#)).

Taken together, these finds suggest that there was little to no demonstrable activity on this section of the Outmarsh in the pre-Viking period, which may well in part indicate continued channel activity through to *c.* AD 900, but that there was then increasing settlement activity in the following Anglo-Scandinavian period, including by people who knew Norse runes and mythology. Whilst many of the finds indicating this are found by or away from the roddons, suggesting the possibility of some continued flow for the channels—which would, on the basis of a comparison with the Fenland, have provided a tempting settlement site if they were extinct—perhaps some way into the tenth century, finds from atop the Long Eau roddon at Saltfleetby St Clement suggest that it, at least, had partially silted up by the end of that century, and finds of slightly later medieval metalwork are subsequently spread all across the roddon top. This sort of dating may also work for the Great Eau roddon, although the main channel could well have lasted slightly longer. All finds from this roddon are currently medieval in date, aside from a piece of later tenth-/early eleventh-century sculpture found in Theddlethorpe St Helen church, which sits atop a small mound (a saltern?) in a possible tributary channel of the Great Eau/Balack Haven roddon.<sup>201</sup> Such a Late Saxon/Anglo-Scandinavian end to these major channels would also fit nicely with the suggestion that the ‘long lands’ or dales laid out across these roddons (long, thin fields up to a kilometre or more long but only 20m or so wide) were the result of a division of common wetlands that occurred particularly during the twelfth and early thirteenth centuries, but which may have begun in the eleventh century.<sup>202</sup>

To the south of Balack Haven was another major roddon associated with what appears to be an estuarine river, in this case flowing across the marsh northwards from Alford. This was discussed in the previous section, where it was noted that the mouth of this creek is highly likely to have been the medieval port of Wilgrip, which seems to have functioned through to the sixteenth century, although the main south–north roddon that once fed it is likely to have been diverted well before the fourteenth century. The early nineteenth-century OS maps suggest that there was still a gap and ‘haven’ just to the south of the mouth of this roddon, known in the 1810s as ‘The Old Gout’ and in 1759 as ‘Theddlethorpe Haven’, and this presumably represents a late echo of Wilgrip. Tellingly, perhaps, the isolated portion of bank which marked the eighteenth- and nineteenth-century northern edge of ‘Theddlethorpe Haven’ and is visible on Lidar was still apparently known as ‘Haven Hill’ in the 1950s.<sup>203</sup> With regard to the antiquity of this roddon, it is worth noting that the above seismic survey<sup>204</sup> also covered this

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<sup>201</sup> Everson and Stocker, *Corpus of Anglo-Saxon Stone Sculpture V*, Theddlethorpe St Helen 01.

<sup>202</sup> Gardiner, ‘Dales, long lands’, pp. 1, 10, 13–14.

<sup>203</sup> Owen, ‘Wilgrip’, p. 39.

<sup>204</sup> Weaver, ‘Historical outfalls’.



Figure 48: (a) Lidar of the area around Wilgrip Haven showing the roddons and former creeks here, along with banks in orange. The ‘former drain’ is the line of a drain that seems to lead to the eighteenth- and early nineteenth-century Old Gout/Theddlethorpe Haven, but which has hints of continuing the line of a former creek. Crook Bank, to the south, also looks to preserve the line of a creek here (Owen 1986 comments on how some earlier medieval sea-banks in the area may have their origins in embankments of roddons/channels, cf. Huttoft Bank). (b) The same area on the 1819 OS draft map of Theddlethorpe, showing The Old Gout filled with water (Source: British Library, Maps OSD 284/[Wikimedia Commons](#)).

part of the coast and showed another deep depression in the underlying surface, suggesting that it is of a similar level of deep antiquity to the Great Eau channel.

Looking north from these three great roddons, it becomes slightly more difficult to disentangle the channel features. Nonetheless, it is clear that the harbour of Saltfleet Haven, the most important medieval port on the coast between Wainfleet and Grimsby and one mentioned in the Domesday Book,<sup>205</sup> was the meeting place for at least two major creeks, one of which follows a sinuous course that joins with the Grayfleet and another than seems to have acted in part as an outlet for the River Lud. Saltfleet Haven, or Saltfleethaven, is located in Skidbrooke With Saltfleet parish and features repeatedly in medieval documentation, with a particular peak in the fourteenth century. The current haven, constructed in the nineteenth century, doesn’t reflect the larger medieval harbour that once existed here and which can still be seen on Lidar, with both the haven banks and the raised silts within the harbour stand out clearly against the surrounding landscape, along with the persistent sand body and dunes to its east that protected it from the sea. The origins of Saltfleet lie in the Anglo-Saxon era and it was of sufficient importance that the king appears to have tried to gain control of the harbour in the thirteenth century, claiming it was a ‘royal port’ in 1273. Trade from Saltfleet in the medieval period included grain, fish and wool, some of which was sent illegally to Scotland and the continent.<sup>206</sup> As at other Lincolnshire ports, however, the clogging of the harbour with silt was a perennial problem that ultimately caused the haven to move away from the settlement; from the late medieval period onwards, such issues led to adjustments to the port and ultimately a decline in its importance, so that by the mid-sixteenth century both it and Wilgrip were described as being ‘in decay’, and in the seventeenth century the original haven was cut off from the sea by a

<sup>205</sup> C. W. Foster and T. Longley (trans. & eds), *The Lincolnshire Domesday and the Lindsey Survey* (Lincoln, 1924), pp. lxxiii, 215, the contents of which implies that Saltfleet Haven existed prior to 1066 as a trading centre.

<sup>206</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 13–14 and *passim* on Saltfleet; for a discussion of the harbour’s landscape, see pp. 314–22. See also Owen, ‘Saltfleet Haven’.

sea-bank (built 1648), leaving only an open creek downstream from this. Subsequently, Saltfleet was only of relatively minor importance, although it seems to have had a brief moment as a fashionable seaside resort for the gentry in seventeenth to nineteenth centuries. In 1673, it was described as ‘a small maritime town of little account, but of chief note for being a place frequented by the gentry in the sommer for the eating of fish’, and by 1773 the New Inn (then the Old Inn) was being promoted as providing ‘every Conveniency for Bathing’, with Saltfleet continuing to be a reasonably fashionable coastal bathing resort until the mid-nineteenth century, when the New Inn’s sea-shore frontage was reclaimed, leading to direct access to the sea being lost and the rapid accretion of new saltmarsh, driving the sea even further from the inn.<sup>207</sup>

In addition to medieval banks and raised silts, a number of saltern mounds are also visible in Saltfleet Haven on Lidar, with some of these appear to have ultimately largely blocking the channels that created the port as well as forming part of the harbour layout.<sup>208</sup> The largest channel entering Saltfleet Haven flowed through Skidbrooke

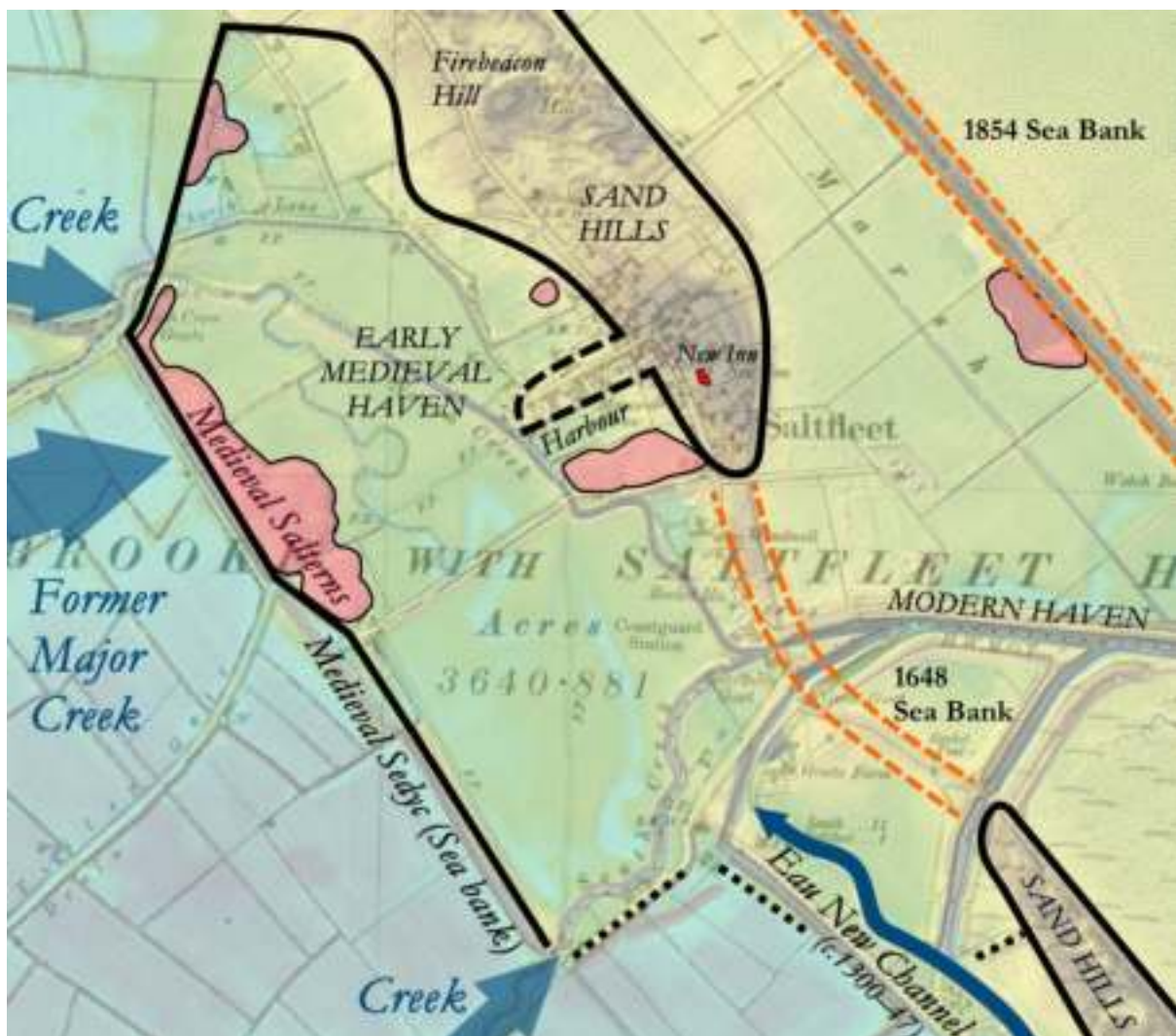


Figure 49: The original extent of Saltfleet Haven, as reconstructable from documentary sources, Lidar and landscape features. Note, the original haven was cut off from the sea in the seventeenth century by the long sea-bank upon which the windmill currently stands; the harbour within the haven, as it existed in the later medieval and early modern periods, was formed in least in part from earlier saltern mounds, and the course of creeks through the original haven is visible on the Lidar. The course of the banks to the south is uncertain, partially due to considerable later alterations in this area, not least the diversion of the Great Eau into the haven.

<sup>207</sup> C. Sturman, “‘The great resort for sea bathing’ – Saltfleet and the New Inn”, *Lincolnshire Past and Present* 12 (1993), 11–13; *Stamford Mercury*, 24 June 1773, p. 4; D. N. Robinson, ‘The Saltfleetby–Theddlethorpe coastline’, *Transactions of the Lincolnshire Naturalists’ Union* 21.1 (1984), 1–12 at p. 3.

<sup>208</sup> See *Geological Survey of England and Wales 1:63,360/1:50,000 geological map series, New Series, Sheet 90 including sheet 91 (Grimshy and Saltfleet)*, published 1990; Pawley, *Lincolnshire Coastal Villages*, pp. 314–23; Owen, ‘Saltfleet Haven’. Salterns may also underlie the medieval tenements and road to the north of the harbour (figs 49 and 50).



Figure 50: A closer view of Saltfleet Haven, showing how the area of the tidal haven had shrunk by the late medieval period. The Harbour/Staithe is well-documented and it is interesting to note that the four major inns of the town all cluster around this: the New Inn, formerly the Old Inn, is thought to have been in existence since at least the 1670s and probably since the later Tudor era, according to Pawley (1984, p. 238), whilst the other three inns are all recorded from at least 1792, the earliest surviving Lindsey Quarter Sessions alehouse recognizances. 'The coal green' lay to the south of the harbour and may indicate the area where colliers once beached to unload their cargoes (Underlying base mapping for this and the preceding two figures is the OS Six Inch 1907 maps of the area, courtesy of the National Library of Scotland).



Figure 51: The modern Saltfleet Haven, which has moved well away from its earlier location and is now a relatively thin straightened creek, rather than a true harbour that could accept a large numbers of ships. The downstream portion of the current haven from here was a sinuous channel prior to its straightening in 1832.





Figure 52: The New Inn at Saltfleet. This is a substantial seventeenth-century T-shaped building, the ‘Old Inn’, with a new additional north wing built in the later eighteenth century, leading to its renaming; it has been suggested that the original ‘Old Inn’ had its origins in the late sixteenth century.

and the current church lies almost on its banks. Archaeological finds recorded by the Portable Antiquities Scheme (fig. 46) suggest that settlement activity in this area once again blossomed in the Anglo-Scandinavian period of the tenth and eleventh centuries, with these finds situated both on top of and besides a tributary roddon, suggesting silting in this era, although a single find of an eighth- or ninth-century pin may indicate ninth-origins for this activity.<sup>209</sup> Interestingly, the main trunk roddon that flowed past the church-site has no finds from its surface of this date, only finds of the thirteenth century and later, which may suggest it survived somewhat longer, although the main body of salterns in the harbour of Saltfleet must have severely restricted its flow once they were constructed over its mouth (probably in the twelfth century).<sup>210</sup> As to whether this creek existed prior to the early medieval period, the answer must be yes. An excavation further up its course, where it becomes the Grayfleet, concluded that there was a substantial marine palaeocreek in just this spot during the Romano-British period, with significant Romano-British activity having taken place by its side during a period of marine regression that made the saltmarsh surface dry enough for occupation at this spot, though probably not more widely.<sup>211</sup> This Romano-British occupation surface was subsequently sealed by 0.5 to 1m of marine sediments laid down by the Late/post-Roman marine advance, but the course of the palaeochannel seems to have been maintained.

With regard to the Lud, the Lidar evidence suggests that there was an enormously complicated net of saltmarsh creeks in the area of Conisholme–South Somercotes, which fits with previous reconstructions that

<sup>209</sup> Portable Antiquities Scheme PUBLIC-FA254B.

<sup>210</sup> Pawley, *Lincolnshire Coastal Villages*, p. 320.

<sup>211</sup> J. Rackham, ‘Geomorphological study’, in *Saltfleetby Gas Storage Project, Lincolnshire: Grayfleet Gas Storage Facility: Archaeological Trial Trenching Report* (Barnard Castle, 2006), pp. 47–52.

identified the Lud river as having several mouths in the early medieval period and flowing across a wide expanse of saltmarsh, sand and silt before reaching the sea.<sup>212</sup> What seems to be the main channel is evidenced by both a roddon and a wide down-cut channel, parts of which went on to become the Seven Towns South Eau, which looks to be a straightened version of this roddon, whilst a second major channel seems to have been straightened to become the Seven Towns North Eau that runs past Conisholme, and a third found its way to Saltfleet Haven.<sup>213</sup> In terms of the dating of the channel system, the geological evidence again points to at least elements of it being very ancient, with the base of the roddons being exceptionally deep here.<sup>214</sup> As to when they ceased to function as saltmarsh creeks, this was presumably prior to the medieval period, when there were sea-banks designed to protect the land inland from sea floods. These banks have left traces in the Lidar of this area both of themselves and of the slightly higher base elevation for the land surface that they created on their seaward side, indicative of that land being exposed to a longer period of spring-tide floods (cf. Croft Bank and the higher saltmarshes to its south, the higher ground east of the Huttoft sea-bank, and the higher ground within the banks of the medieval Saltfleet Haven). Based on this, it can be tentatively suggested that the original pre-twelfth-

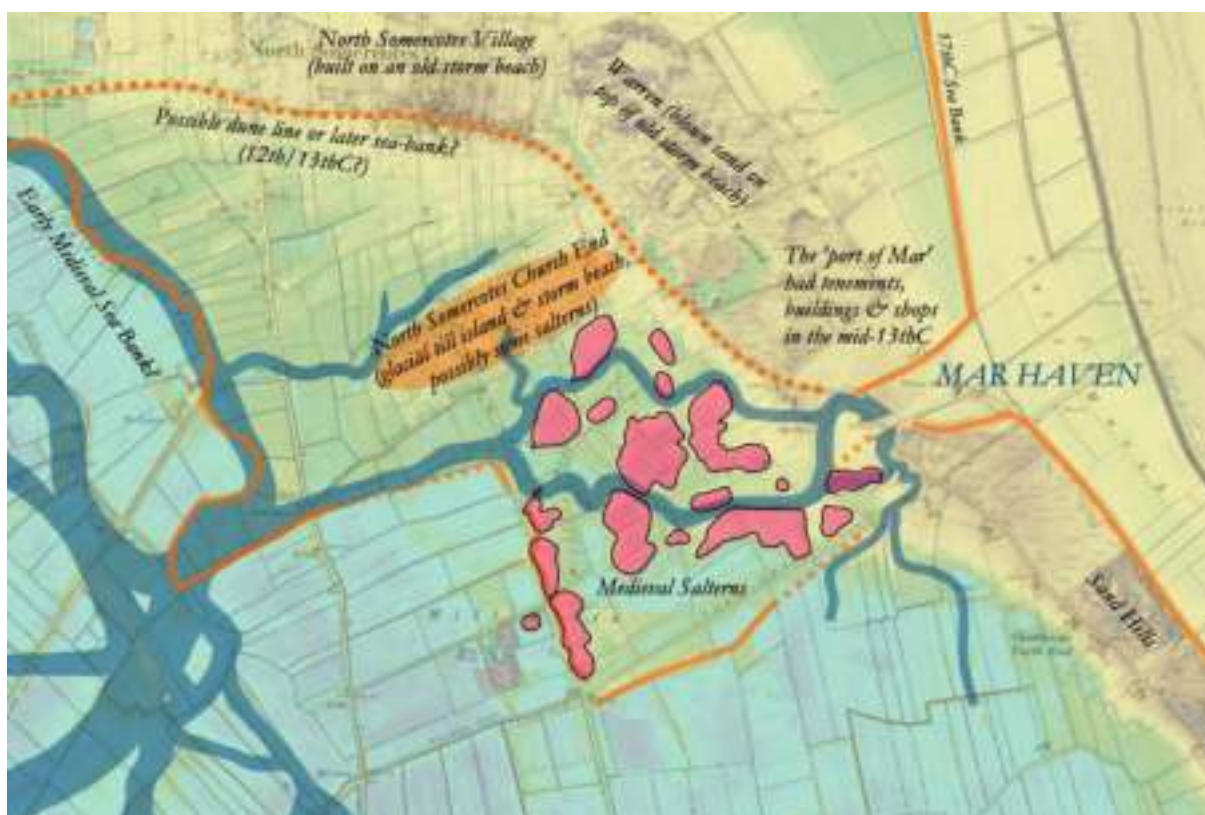


Figure 53: A map of the area of Mar Haven, North Somercotes, with Lidar evidence overlain to show the significantly higher silts within the likely early haven (in existence before 1066) and to the east of the current line of the Seven Towns South Eau, which it is suggested here probably reflects the early medieval coastline and arguably an early sea-bank, with this following the line of a channel as has been proposed for some other medieval sea-banks on this coastline. Note, the Lud roddon largely disappears into the higher silts beyond the suggested coastline/bank, but the Seven Towns South Eau at least partly flowed through Mar Haven until the blocking of the latter and traces of this are present. The area of the early haven itself is defined by the medieval (Late Saxon onwards?) saltern mounds that fill it, with some of the most westerly having a straight western edge that is very reminiscent of the salterns backing onto the sea bank in Saltfleet Haven. The southern bank of the early Mar Haven seems to be partially traceable on the Lidar and via the area of raised silts, with this eventually joining with the line of sandhills, whilst the entrance to/final extent of Mar Haven is suggested by the banks perpendicular to the coast here; see also fig. 55 (Base map: OS Six Inch, NLS).

<sup>212</sup> Robinson, *Lincolnshire Seaside*, p. 17. It also fits with its apparent pre-English name, the Cocker or ‘crooked river’, preserved in the village-name Cockerington: C. Green, *The Origins of Louth: Archaeology and History in East Lincolnshire 400,000 BC–AD 1086* (Louth, 2014), p. 66; Green, *Britons and Anglo-Saxons*, p. 231.

<sup>213</sup> D. N. Robinson, *The Book of Louth: The Story of a Market Town* (Buckingham, 1979), p. 43; Robinson, *Lincolnshire Seaside*, p. 19—he notes that one of the Lud’s multiple outfalls was very probably Mar Haven.

<sup>214</sup> See Berridge and Pattison, *Grimsby and Patrington*, pp. 63–5 for a general view, although a thorough survey of the boreholes suggests it needs revision e.g. the peninsula that underlies North Somercotes looks very much more like an island. See further the reconstructions of the underlying landscape in fig. 92, below, and Section 3.1.

century sea-bank probably stood on the line of High Bank, Grainthorpe (probably originally a *Hafdic* name)<sup>215</sup> and then followed the line of the current Seven Towns South Eau to the west of North Somercotes,<sup>216</sup> before running eastwards and southwards around the edge of a clear area of salterns with a linear alignment, as can be seen in fig. 53.<sup>217</sup> This line is depicted in the accompanying maps (figs 53, 55, 58, 59), but it is worth noting here that the medieval salterns to the south of the till island underlying North Somercotes Church End are likely to have been built up within the original Mar Haven that probably lay beyond this suggested sea-bank.<sup>218</sup> Mar Haven is recorded from the eleventh century through to the thirteenth as a port, being already in existence in 1066,<sup>219</sup> and so any bank around it may date back at least this far. The presence of ‘long lands’ in this area, including immediately inland of Grainthorpe’s ‘High Bank’ and the Seven Towns South Eau, similarly suggests that the wide Outmarsh had probably started to be ‘reclaimed’ by the eleventh/twelfth century here (see further below), as does the fact that the church at Conisholme—Scandinavian for ‘the king’s island’<sup>220</sup>—sits atop a probable former roddon on a slight mound and contains a piece of later tenth or early eleventh century sculpture that indicates the presence of a church with burial rights here at least this early.<sup>221</sup>



Figure 54: The island of Stain or Stain Hill, centre, one of the highest points in the Outmarsh with a peak of around 9m OD.

Aside from the network of channels and the probable sea-banks mentioned above around Mar and Saltfleet Havens, the Lidar evidence also shows a number of other features. First, it shows a handful of islands within the early medieval coastal zone. Although far fewer in number than those in the previous map, these till islands were of some significance. The churches of North Somercotes and Saltfleetby All Saints both appear to have been built on or by such islands, as was, arguably, the Middle

Saxon site of Little Carlton (although this ‘island’ was located right at the edge of the Middle Marsh). Most of the islands were small, but one was rather larger. This is the island now represented by Stain Hill (Withern with

<sup>215</sup> A notion that seems to be shared by J. E. Redford, see her *An Edition of the Cartulary of Abingham Priory* (Oxford, Bodleian Library, *Laud Misc.* 642), 2 vols. (University of York PhD Thesis, 2010), vol. 1, p. 70 (map 2).

<sup>216</sup> Owen, ‘Salt, sea banks’, p. 47, comments on how some earlier medieval sea-banks in the Outmarsh area may have their origins in embankments of roddons/channels, cf. the discussion of Huttoft Bank, above.

<sup>217</sup> This bank/coastline would predate the more easterly possible dune line/sea-bank that has been suggested to have followed the line of modern Keeling Street: Owen, ‘*Hafdic*’, pp. 48, 54; D. M. Grady, ‘Medieval and post-medieval salt extraction in north-east Lincolnshire’, in R. H. Bewley (ed.), *Lincolnshire’s Archaeology from the Air* (Lincoln, 1998), pp. 81–95 at p. 90.

<sup>218</sup> For the till island, see Field and Tann, *Church End, North Somercotes*, p. 3; the Lidar suggests that there may also be some saltern mounds buried under the storm beach at North Somercotes Church End too. Note, the presence of both a north–south bank/*hafdic* and the original Mar Haven in this area is also suggested in North Somercotes & District Study Group, ‘*Yan Tan Tethera*’: *A Story of a Lincolnshire Marsh Village, North Somercotes* (North Somercotes, 2017), pp. 2–3 and map.

<sup>219</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 13, 92; Owen, ‘Saltfleet Haven’, pp. 88–90; Foster and Longley, *Lincolnshire Domesday*, p. 215. The ‘port of Mar’ is recorded as having ‘tenements, buildings and shops’ at some point after 1264–5: Owen, *Medieval Lindsey Marsh*, p. 107.

<sup>220</sup> Cameron, *Dictionary of Lincolnshire Place-Names*, p. 33.

<sup>221</sup> Everson and Stocker, *Corpus of Anglo-Saxon Stone Sculpture V*, Conisholme 01; Grady, ‘North-east Lincolnshire’, p. 88.

Stain parish), near Mablethorpe. This appears very prominent indeed on Lidar, due to its maximum height of around 9m OD, and there is a clear and complex network of channels all around it, linked to the Wilgrip/Balack Haven roddons. Like the large islands in the previous map-view, the island has evidence for occupation in the prehistoric period, via worked flints, and in the Romano-British period. The latter evidence consists of one of the largest concentrations of Roman coins from the entire Marsh, namely 53 late fourth-century coins of Gratian to Valentinian II (AD 367–92), which were found in the vicinity of cropmarks that bear comparison with Roman-era settlement cropmarks from elsewhere in eastern Lincolnshire, including one that looks like a form of large rectilinear enclosure with regular internal divisions that is found associated with villas.<sup>222</sup> Subsequently, the island saw occupation in the Early, Middle and Late Saxon periods and may have functioned as a local central place of some sort in the pre-Viking era, before becoming the site of a medieval village, moated manor and chapel.<sup>223</sup>

Second, there are a number of saltern mounds and possible saltern mounds visible on the Lidar in the area, unlike in the previous map-view. Concentrations of these are found at Saltfleet Haven and Mar Haven, but others are scattered around the area. Arthur Owen has suggested that medieval churches of Skidbrooke,

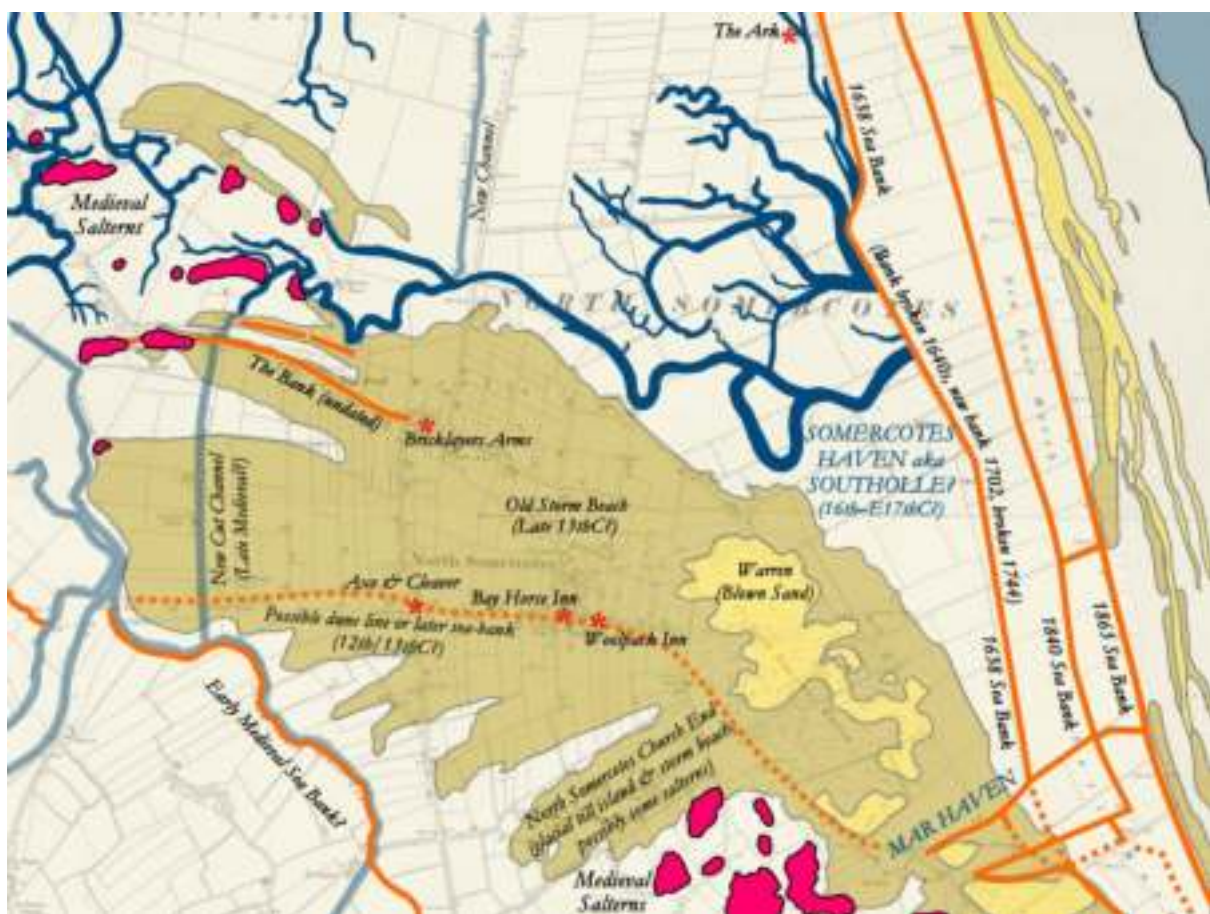


Figure 55: The storm beach deposits at North Somercotes, which were probably laid down over the coastal zone here from the later thirteenth century and probably brought an end to Mar Haven as a significant port. Also shown is the rarely recorded haven of Southolle or Somercotes Haven—the creeks of this area (dark blue; light blue on this map is modern drainage) are traceable in early mapping and Lidar, and they offer a tempting identification for this ‘lost’ port. Note, it has been suggested that Eau Bank was a medieval drainage diversion; it is accepted as such here and marked ‘New Cut Channel’. The five nineteenth-century inns and public houses of North Somercotes are also shown; The Ark, whose name still lives on, seems to have been founded out amongst the former creeks and caused issues for the police, it being said to be ‘so situated that no one is able to approach it within a quarter of a mile without being observed by a boy, who is supposed to be set to watch for the police and thus give timely warning to the inmates’ (*Boston Guardian*, 23 January 1875, p. 2). Base mapping is from the 1907 OS Six Inch series, NLS.

<sup>222</sup> See D. Jones, ‘Romano-British Settlements on the Lincolnshire Wolds’, in R. H. Bewley (ed.), *Lincolnshire's Archaeology from the Air* (Lincoln, 1998), pp. 69–80; C. Green, ‘Stain Hill and the Lincolnshire Marshes in the Anglo-Saxon period’, blog post, 2 November 2014, <https://www.caitlingreen.org/2014/11/stain-hill-anglo-saxon-marsh.html>.

<sup>223</sup> Green, ‘Stain Hill’; see HER MLI41132 for the Middle Saxon finds, which suggest a ‘productive site’.

Saltfleetby St Peter (original site) and Theddlethorpe All Saints were all constructed atop such mounds,<sup>224</sup> and the above discussion would add that Theddlethorpe St Helen and Conisholme churches also sit on slight mounds by or on former roddons.

Third, the Lidar data shows a substantial area of raised ground underlying the village of North Somercotes to the north and then extending down the coast towards Saltfleet. This correlates closely with the British Geological Survey's mapping of storm beach deposits in this area. The exact mechanism of the formation of this wide, high storm beach is subject to some debate,<sup>225</sup> but it seems reasonable to believe that it post-dates, or even brought about the end of, Mar Haven, as it looks to have blocked this to some significant degree. As such, Robinson's suggestion that it was, at least partially, created in the thirteenth century and after, when unusually powerful storms destroyed a bank of offshore barrier islands that had protected the Lincolnshire coast and deposited them on the then-shoreline as this broad storm-beach, seems credible. However, it should be noted that it is likely that the storm beach was deposited on top of what was already a wide, persistent sand body in this area, and that it may overlie and rework older storm beach deposits that are suggested to date back 2–3,000 years.<sup>226</sup>

Finally, south of Theddlethorpe and Wilgrip, the Lidar shows only a very thin line of dunes separating the low-lying Outmarsh from the sea. This stands in marked contrast to the situation further north, where wide saltmarshes have developed in front of the dunes, particularly in the last hundred years or so.<sup>227</sup> It does, however, remind us that documentary sources confirm that the coast here is very vulnerable to erosion by the sea, with a substantial amount of land having been lost here during the 'stormy centuries' of the 1200/1300s and after.<sup>228</sup> As was noted in the discussion of the previous map-view, the medieval sea-bank in the area north of Sandilands appears to be entirely absent and eroded away: it presumably lay some distance out from the current coastline, a proposition supported by documentary references to the loss to the sea of the original churches and villages of Sutton-in-the-Marsh (Sutton-on-Sea), Mablethorpe St Mary and Mablethorpe St Peter in the medieval and post-medieval periods. Mablethorpe St, Peter was, for example, 'rent asunder by the waves of the sea' and 'entirely destroyed' in storms during 1286 and 1288. Though it was rebuilt, the parish continued to suffer until the late 1530s, when the church, its village and the greater part of the parish were 'overflowed with water in the sea' and never recovered.<sup>229</sup> As late as the 1870s, the church ruins of Mablethorpe St Peter could still be seen from the dune-top at Mablethorpe, and it was said in the 1930s that the sea continued to occasionally throw up carved

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<sup>224</sup> Owen, 'Salt, sea banks', p. 46.

<sup>225</sup> Robinson, *Lincolnshire Seaside*, p. 20; D. N. Robinson, 'Coastal evolution in north-east Lincolnshire', *East Midlands Geographer* 5 (1970), 62–70; Berridge and Pattison, *Grimbsby and Patrington*, pp. 66–8; Grady, 'North-east Lincolnshire', pp. 88–90.

<sup>226</sup> Berridge and Pattison, *Grimbsby and Patrington*, pp. 63–8. The coastal barrier islands were first suggested by H. H. Swinnerton, 'The post-glacial deposits of the Lincolnshire coast', *Quarterly Journal of the Geological Society* 87 (1931), 360–75. See also H. H. Swinnerton and P. E. Kent, *The Geology of Lincolnshire From the Humber to the Wash*, second edition (Lincoln, 1981), pp. 99–103; Robinson, *Lincolnshire Seaside*, pp. 13, 17 (map), 20; Pawley, *Lincolnshire Coastal Villages*, pp. 69–70, 73–5, 80; S. Bennett & N. Bennett (eds), *An Historical Atlas of Lincolnshire* (Hull, 1993), p. 8; Institute of Estuarine and Coastal Studies, *Humber Estuary & Coast* (Hull, 1994), p. 33; Fenwick, *Lincolnshire Marsh*, pp. 54, 160, 174, 181–2, 189, 199, 202, 267, 304; Natural England, *NA 101: Bridlington to Skegness Maritime Natural Area Profile* (Sheffield, 2013), pp. 11, 21; and K. Pye *et al*, *Sand dune processes and management for flood and coastal defence Part 1: Project overview and recommendations*, Defra/EA Flood and Coastal Erosion Risk Management R&D Technical Report FD1302/TR (2007), p. 8.

<sup>227</sup> Robinson, 'The Saltfleetby–Theddlethorpe coastline'.

<sup>228</sup> Owen, 'Coastal erosion'; C. Green, 'The drowned villages and eroding coastline of Lincolnshire, c. 1250–1600', blog post, 10 May 2015, <https://www.caitlingreen.org/2015/05/drowned-villages-of-lincolnshire.html>.

<sup>229</sup> Owen, *Medieval Lindsey Marsh*, pp. 72–3; Owen, 'Coastal erosion'; A. E. B. Owen, 'Mablethorpe St Peter and the sea', *Lincolnshire History and Archaeology* 21 (1986), 61–2; Pawley, *Lincolnshire Coastal Villages and the Sea*, pp. 73–84; Robinson, *Lincolnshire Seaside*, pp. 19–22; Green, 'Drowned villages and eroding coastline of Lincolnshire'.

stone from the church onto the foreshore.<sup>230</sup> Likewise, the church at Sutton-in-the-Marsh was said to have been ‘since destroyed by the sea’ in 1398–1409, and the replacement church seems to have been itself eaten by the sea in the mid-sixteenth century, along with ‘some houses inhabited, and very much of the best grounds in our said town’.<sup>231</sup> With respect to just why this coastline seems to have become so vulnerable to erosion from the thirteenth century onwards, the above-mentioned erosion of the offshore coastal barrier islands that once protected it probably holds the key. As Simon Pawley put it, when these islands were destroyed by an unprecedented series of storms in the 1200s, the coastline no longer looked out on to what had been a sheltered lagoon, but instead the open sea. As such,

a coastline, sheltered for four and a half millennia and topographically and geologically unprepared for the experience, was now exposed to whatever forces of tide and weather had formerly operated on the line of the barrier islands. More floods and coastal disasters were an inevitable result, especially since the stormy conditions of the thirteenth century continued into the fourteenth.<sup>232</sup>



Figure 56: The view over Mablethorpe beach to the north of the pullover; the settlement and church of Mablethorpe St Peter is said to lay offshore in around this area, with part of the church ruins apparently still able to be seen north-east of the main Mablethorpe pullover as late as the 1870s.

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<sup>230</sup> Robinson, *Lincolnshire Seaside*, p. 21; W. A. B. Jones, ‘Mablethorpe’, *The Lincolnshire Magazine* vol 1 (Lincoln, 1932–4), 203–06 at p. 204. Metal-detectorists scouring the beach here at extremely low tides have also found a significant number of artefacts that must have come from this village (D. Lascelles, *pers. comm.*).

<sup>231</sup> Owen, *Medieval Lindsey Marsh*, pp. 115–6; Owen, ‘Coastal erosion’, p. 334.

<sup>232</sup> Pawley, *Lincolnshire Coastal Villages*, p. 75. See the footnotes above for references to these islands and their destruction.

## 4 The Lincolnshire Marsh from North Somercotes to Humberston

This map-view shows significant differences compared to those already discussed. Whereas on those, the majority of the Outmarsh appears as a very low-lying plain that was studded by a number of former islands and protected from future flooding by the sea by banks or a relatively thin line of dunes, here there is a vast, complex area of land seaward of the low-lying plain, characterised by a mixture of dunes, reclaimed saltmarshes, and a wide band of small, artificial islands created by the medieval salt-making industry here. Key points relating to the evidence from this map-view include the following.

- It is once again more complex to trace the route of channels in this area on Lidar. Although some are relatively clear, especially in the south and where the down-cut channels are preserved, others require significant manipulation of the Lidar mapping and use of the both the Environment Agency's DTM and DSM Lidar datasets in order to reach any conclusions. As such, some of the channel reconstructions are slightly tentative in places.
- Aerial photography from both historic collections and the Google Earth dataset proved useful in terms of identifying medieval saltern mounds, which show up very well on these sources, and channels in the post-medieval reclaimed saltmarshes. However, they were less useful on the low-lying main Outmarsh plain, helping to confirm channels instead of adding new details or allowing channel systems to be traced from this data-source alone.
- The field pattern in this area between the Middle Marsh and the salterns is generally regular, bearing little relationship to the recoverable channel pattern. Local minor place-name evidence suggests this area was largely used for seasonal wetland grazing, so this may in part help explain this situation. However, a surviving early map of Fulstow and Marshchapel from 1595 is of considerable help here, showing that the rectangular block fields of these parishes actually are consolidated 'long lands', at least to some degree, which were created from at least the eleventh century and through the medieval period as subdivisions of common wetlands.<sup>233</sup> In the higher ground area to the east of the main villages of Marshchapel and Grainthorpe, the cartographic data is of more use, as ditches and boundaries often preserve early features, though this area is also very well-served by both Lidar and aerial photography.
- Geological data is of use in confirming that the lines of some of the major roddons are likely to preserve very ancient landscape features that have their origins in the initial, Mesolithic inundation of this landscape. It is also very helpful in showing the existence of persistent sand-bodies that likely helped protect the coast here from the early prehistoric era onwards.<sup>234</sup> One of these was mentioned above as underlying the later storm beach of North Somercotes, whilst the other seems to have run southwards from Humberston down to the Grainthorpe area and underlies the medieval saltern mounds in this area. Between the two bodies is a gap which correlates well with the main outlet of the River Lud system of palaeochannels between Grainthorpe and North Somercotes, suggesting that this too is likely to have its origins in the initial inundations of the region.

Once again, there is no obvious evidence for multiple periods of significant overlapping roddons on the Lincolnshire Outmarsh. Instead, the pattern we see very probably represents a single system in operation in the early medieval period, albeit one which saw occasional changes in channel locations within that era and alterations towards the end of its life. Certainly, Romano-British sites to the immediate south, like Scupholme

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<sup>233</sup> G. R. Walshaw, 'An ancient Lincolnshire map', *The Lincolnshire Magazine* 2 (1934–6), 196–206; T. Maybury, *A Century of Change on the Lindsey Marshland: Marshchapel 1540–1640* (University of Hull PhD Thesis, 2011); Gardiner, 'Dales, long lands'.

<sup>234</sup> Berridge and Pattison, *Grimsby and Patrington*, pp. 63–8.

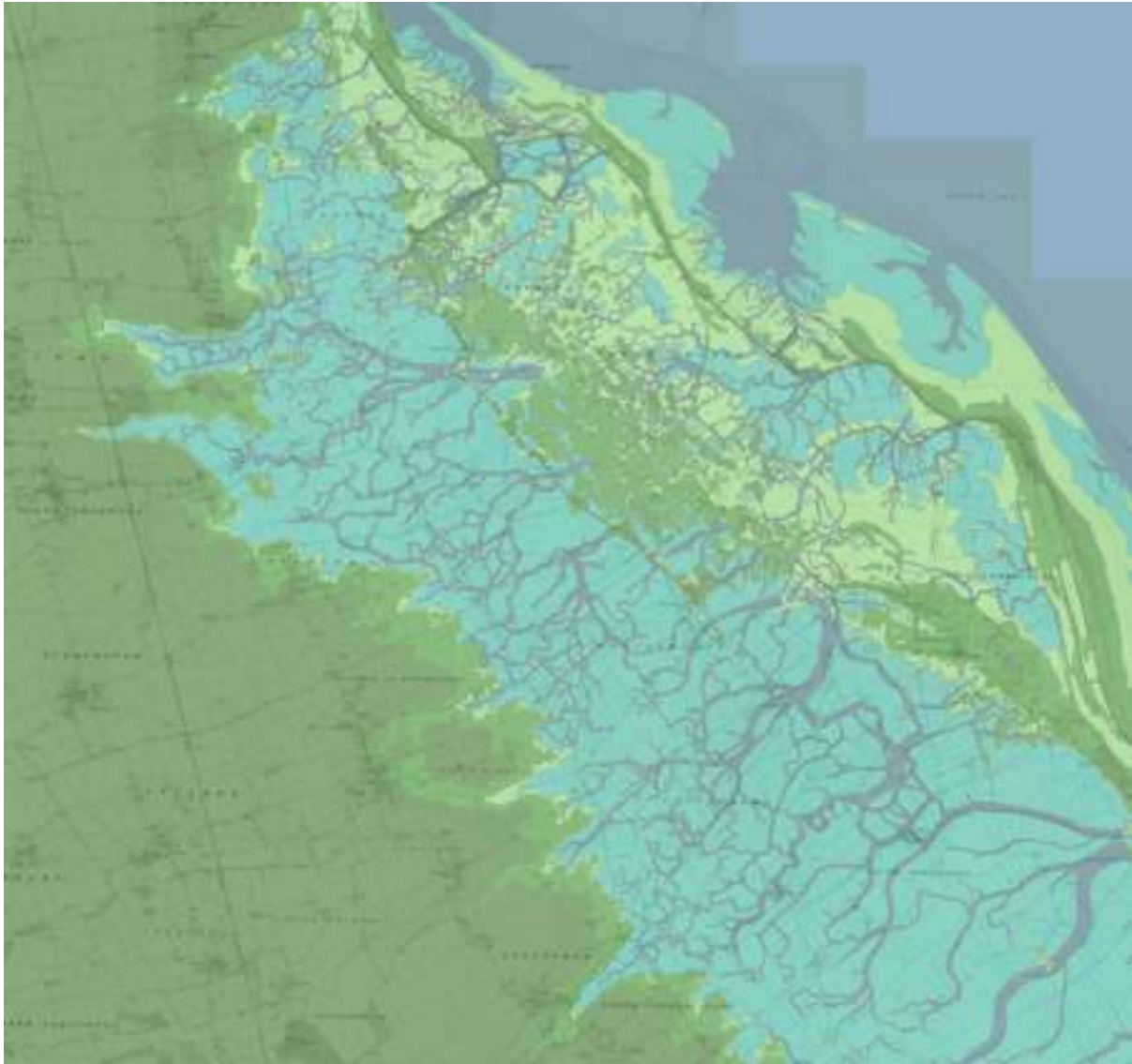


Figure 57: Reconstruction of the channel systems in place in the northernmost Lincolnshire Marsh around Tetney and Marshchapel, based on Lidar data, aerial photographs and other sources as set out in the main text.

and Howdales (South Cockerington), are clearly buried under 0.5–3m of Late/post-Roman marine silts, and as the surface of the Outmarsh plain in this area lies at around the same elevation as there (*c.* 1.5–2.1m OD, although it is very slightly lower around North Cotes and slightly higher around Tetney), there seems little reason to separate this area from this conclusion. In this light, it is worth noting that a significant Romano-British settlement on the Outmarsh flats was discovered by the Humber Wetlands Project, reflecting the fact that areas of the Outmarsh were slightly drier in the Roman era and so suitable for some occupational activity.<sup>235</sup> Finds dating from the second to the fourth century AD include building debris and 1795 sherds of pottery, and the site was probably involved in the end-stage processing and transportation of the salt produced at nearby salterns; however, no traces were left of settlement features on the site, which are believed to be buried under a deep overburden and so are probably situated similar to those at Howdales, below a substantial layer of later marine sediments.<sup>236</sup>

<sup>235</sup> See Rackham, ‘Geomorphological study’ for the habitability of the Romano-British Outmarsh; for the Marshchapel site, see Ellis *et al*, *Lincolnshire Marsh*, pp. 132–7 and Green, *The Origins of Louth*, p. 48.

<sup>236</sup> L. Martin, *Marshchapel, Lincolnshire: Report on Geophysical Survey, December 1999*, Ancient Monument Laboratory Report 15/2000 (HBMCE, 2000), pp. 3–4; Ellis *et al*, *Lincolnshire Marsh*, pp. 136–7.



Looking at the pattern of channels visible and reconstructable in this map-view, they show a similar system in operation to that discussed for the previous areas of the Lincolnshire Marsh. In all, there are a large number of smaller, dendritic channels indicative of saltmarsh conditions existing here in the early medieval period, along with a few larger ‘trunk’ roddons. One of these is the channel around 200m or so wide that flows out between Grainthorpe and North Somercotes. As noted above, this is likely to be exceedingly ancient, at least in its mouth position, as the sand bodies underlying North Somercotes and Humberston–Grainthorpe from at least the start of the Neolithic left a sizeable gap here for it to flow out of. Further hints suggestive of the antiquity of this channel system come from the fact that an area of late prehistoric/Romano-British salterns is found close to its probable early medieval mouth at North Somercotes, suggesting that this creek and coastline was being used industrially in that era,<sup>237</sup> and the intriguing coincidence that, at the western end of the creek network, a major tributary channel looks like it reached dry land between Alvingham and Yarburgh, just where Barrie Cox has previously suggested there was a significant Late Roman earthen fortification associated with coastal defence and requiring access to the sea via such a creek.<sup>238</sup> Looking at the question of the channel system’s decline, unlike in the area to the south, there is no significant evidence for later early medieval (*i.e.* Late Saxon/Anglo-Scandinavian) occupation on top of the main roddon, though Conisholme church, discussed above, sits atop a mound in what looks like a tributary roddon. There are, however, a couple of finds of Late Saxon/Anglo-Scandinavian metalwork from just by the side of these creeks (at North Somercotes and Grainthorpe), which may suggest this large channel and its main tributaries retained a landscape significance into the eleventh century.<sup>239</sup> At the same time, what looks to be the ‘final channel’ for the lower part of this roddon became both the Seven Towns North Eau and the parish boundary between Grainthorpe and Conisholme, which indicates continued importance and is reminiscent of the situation in the southern Lincolnshire Marsh and the Great Eau roddon.

As to when the roddon system finally fully silted up to be replaced by freshwater drains—albeit ones that reused parts of the roddons’ ‘final channels’—leading to a sea-sluice in a protective sea-bank, it seems clear that this must have probably happened by the later tenth/early eleventh century in at least some areas of this map-view, given the building of the early church at Conisholme then, something that strongly implies the presence of a permanent settlement. The existence of areas of medieval ‘long lands’ laid out over and by the roddon channels is likewise suggestive of the area ceasing to be at significant risk from the sea by perhaps the eleventh century. Of particular note here may be those ‘long lands’ found in the *Aldecroft* (‘old field’) of Grainthorpe. The *Aldecroft* lay directly behind the High Bank (probably an early sea-bank/*hafidū*),<sup>240</sup> extended over the main roddon channel, and was clearly already ‘old’ by the time it was first mentioned in the late twelfth/early

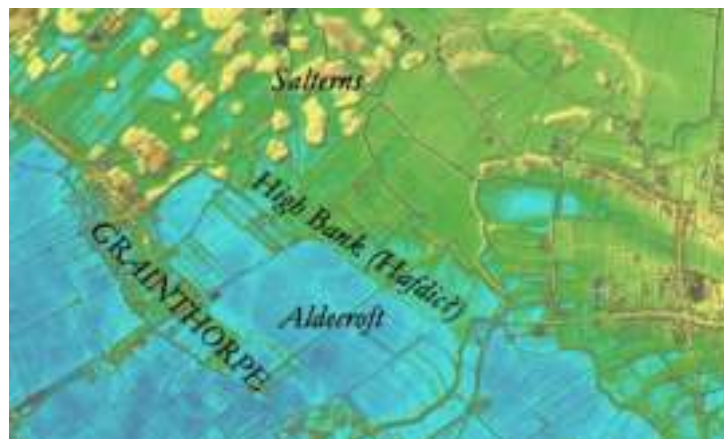


Figure 58: Lidar image of the area around Grainthorpe, adjusted to show not roddons, but rather how the areas inland of the High Bank, including the *Aldecroft*, are noticeably lower in elevation, suggesting that the High Bank is indeed an early sea-bank.

<sup>237</sup> Lincolnshire HER MLI43320, which notes the presence of ‘much briquetage’, a find-type indicative of pre-medieval salt-making.

<sup>238</sup> B. Cox, ‘Yarboroughs in Lindsey’, *Journal of the English Place-Name Society*, 28 (1994–5), 50–60; see further Green, *Origins of Louth*, pp. 55–6, 65.

<sup>239</sup> Portable Antiquities Scheme SWYOR-DD74CC (eleventh-century mount from Grainthorpe) and NLM-300537 (ninth- or tenth-century disc brooch from North Somercotes).

<sup>240</sup> See further the discussions above and also below, in this section.

thirteenth century, given its name.<sup>241</sup> Likewise, similar 'long lands' are found in the area seawards of Conisholme church up to the Seven Towns South Eau, also probably an early sea-bank, based on the Lidar evidence showing the area east and north of it being raised above the areas behind it (see above and figs 53, 55 and 58).

Looking further north, the next major roddon system is found in the Grainthorpe–Wragholme area, although it was probably ultimately a tributary system branching off from the major Lud roddon. The Swine Dike as marked on the nineteenth-century OS Six Inch maps has a very sinuous pattern and probably reflects the 'final channel' of part of this roddon system, whilst the other elements of same channel system probably flowed through a largely 'empty area' between Grainthorpe and Wragholme. This zone, in a notable contrast to the situation immediately to the north and north-west, has a patchy, open distribution of medieval saltern mounds,



Figure 59: The area around Grainthorpe, showing the banks (orange) to either side of the village and elsewhere, the long-lands of the *Aldecroft*, the saltern mounds (pink), and the suggested development of Swine Haven from the early medieval period.

with sizeable unutilised areas, that is reminiscent of the situation at Saltfleet Haven and (especially) Mar Haven, as too is the long, thin, straight area of saltern mounds found here that apparently backed on to a sea-bank (that which enclosed the *Aldecroft*). Given the above, I would tentatively suggest that this area across to the Swine Dike and the probable north-western *hafdic* of the *Aldecroft* was the original location for the important early port of Swine Haven, which is known to have been located in Grainthorpe parish. The first reference to this port is found in Domesday Book, where Swine, Mar and Saltfleet Havens are all mentioned in such a way as to indicate that they were already in existence prior to 1066, and Swine/Grainthorpe Haven is thereafter mentioned multiple times through to the early sixteenth century.<sup>242</sup> Although its location is often placed where the Swine Dike met the South Towns North Eau,<sup>243</sup> this is on the basis of seventeenth-century sea-banks found there and, as the probable meeting-place of two great early

<sup>241</sup> Redford, *Cartulary of Alvingham Priory*, vol. 1, pp. 70, 75, 226.

<sup>242</sup> C. W. Foster and T. Longley (trans. & eds), *The Lincolnshire Domesday and the Lindsey Survey* (Lincoln, 1924), pp. lxiii–lxiv, lxxxvii, 215; Pawley, *Lincolnshire Coastal Villages*, pp. 13, 24, 29, 93, 101, 104, 105, 107, 112; Grady, 'North-east Lincolnshire', pp. 90, 93.

<sup>243</sup> As by Grady, 'North-east Lincolnshire', pp. 90, 93, and Redford, *Cartulary of Alvingham Priory*, vol. 1, p. 70.

medieval creek-systems well away from the known settlement sites, it may have been rather dangerous and wet at this point. More plausible is that the original haven was in the ‘empty area’ across to Swine Dike and close-by the Domesday village of Grainthorpe, as suggested here, and that the 1638 banks actually enclose the haven as it existed at that time (when it was known as Grainthorpe Haven), it having moved seawards due to silting and perhaps encroachment from salterns.<sup>244</sup> Such silting, encroachment and movement seawards is certainly a common occurrence amongst the coastal ports of Lincolnshire, as is evidenced at both Saltfleet Haven and Wainfleet Haven, for example, and it clearly continued at Grainthorpe after this point too, as the early nineteenth-century Grainthorpe Haven was even further seaward and so too again was its late nineteenth-century replacement (see fig. 59).<sup>245</sup>

At some point, these creek systems, as they existed to the west of Grainthorpe–Wragholme–Marshchapel, were cut off from the sea. The current freshwater drainage inland of these settlements bears little relationship to that seen in the Lidar, but it was clearly in existence by the medieval period proper, as medieval charter evidence mentions not only the names of these new, straightened watercourses, but also landscape features like *Newcroft* (‘New field’), *Calvecroft* (‘Calves’ field’), and, most tellingly, *Cornlandes*.<sup>246</sup> The Sea Dyke Way (aka *Cunigesgate*) that connects



Figure 60: The slight rise visible in the centre of the picture represents all that remains of the line of High Bank as it goes across Marsh Lane, Grainthorpe.

the line of settlements from Grainthorpe to Wragholme, Marshchapel and North Cotes, is often considered to represent an early sea-bank that allowed this to take place. It is clearly visible on the Lidar for much of its course, but we do need to recognise that it may well have been constructed at a variety of dates (cf. Croft Bank, above), rather than as a single project.<sup>247</sup> Of the various settlements on this line, only Grainthorpe is mentioned at Domesday, when it seems to be a substantial settlement that had already converted some of the saltmarsh to agricultural lands, given references not only to meadow lands and salt making, but also land for plough teams here.<sup>248</sup> On this basis, it seems likely that at least the sea-banks around Grainthorpe were in existence prior to 1066—we have already mentioned the ‘High Bank’ (*Hafdic?*) that protected the ‘long lands’ of *Aldecroft* (‘the old

<sup>244</sup> A possible narrowing of the original suggested Swine Haven might be evidenced by the hints of a bank running up its middle, but this is uncertain; nonetheless, something similar seems to have happened to the seventeenth-century Grainthorpe Haven to create its early nineteenth-century descendant.

<sup>245</sup> See Pawley, *Lincolnshire Coastal Villages*, for a good discussion of the silting of the medieval Lincolnshire coastal ports, and Simmons, *Fen and Sea*, for the evolution of Wainfleet Haven, which saw it gradually migrate from a position approximately 13km inland from its current mouth in the early medieval period, to the town of Wainfleet in the twelfth century (7km inland along the current haven), and to Queen’s Gowt in the sixteenth century (about 4.5km inland or so now). With regard to salterns, see also, for example, Mar, Leake, Wrangle and Friskney Havens.

<sup>246</sup> See Redford, *Cartulary of Abvingham Priory*, vol. 1, p. 70 (Map 2), and the individual charters which mention these features in Grainthorpe. The minor place-name evidence for Marshchapel parish is available in K. Cameron, *The Place-Names of Lincolnshire, Part 4: The Wapentakes of Ludborough and Haverstoe* (Nottingham, 1996), pp. 113–33; unfortunately, no volume has been published yet to cover Grainthorpe, but Redford’s volume includes considerable useful information on this topic.

<sup>247</sup> See Grady, ‘North-east Lincolnshire’, and Fenwick, *Lincolnshire Marsh*, pp. 266, 306.

<sup>248</sup> Foster and Longley, *Lincolnshire Domesday*, pp. 23, 32, 103, 258. It may have been established on very slightly raised ground here that reflected the outer edge of Romano-British coastal marshes, see Fenwick, *Lincolnshire Marsh*, pp. 192, 306.



Figure 61: The meanings of selected major (red) and minor (blue) place-names in the Tetney–Grainthorpe Outmarsh and Middle Marsh edge. Note especially the repeated appearance of ‘Summer Pasture’ (*Sumerette* and variants) in multiple parishes, usually for large areas of land, suggesting that there was once a wide area of the Outmarsh known as this from an early date; it should also be noted that the ‘look-out hill’ (Old English *tōt-hyll*) is recorded only via a river named after it—it was perhaps originally located on one of the easternmost islands of glacial deposits in this area (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

field’) in Grainthorpe, but two further banks are considered to lie either side of Grainthorpe village itself, one being the westerly Sea Dyke Way and the other being represented by the easterly High Street (see the map of the Grainthorpe area; these banks are only barely visible on Lidar). It can be tentatively suggested that these are likely to be the earliest sea-banks in the area, not least because they not only seem to protect the only certainly eleventh-century settlement here, but also appear to be orientated for a situation whereby marine flooding might come from either the east or the west, implying their construction when the creek systems still flowed inland of Grainthorpe in this part of the Outmarsh (compare here the *Defdyke*/Dudick Bank on the west side of Addlethorpe/Ingoldmells and Winthorpe, above). The ‘High Bank’ then presumably followed soon after, as it created an enclosed area—*Aldecroft*—that was laid out in long dales and was already ‘old’ in the later twelfth/early thirteenth century, with the eleventh-century port of Swine Haven then arguably being located immediately to the north of the village. The subsequent extension of the Sea Dyke Way to Wragholme and beyond would be a third stage in this development, cutting off the creeks to prevent them flowing behind Grainthorpe and allowing the desalination of the lands between Grainthorpe/Wragholme and the Middle Marsh, thus enabling the creation of the *Cornlandes* (mentioned in the thirteenth century) and *Newcroft* (‘New field’) here.

North-west of Wragholme, there are two further major creek systems visible, one at Marshchapel and another at North Cotes. The first of these is likely to have continued to operate at least in part into the early twelfth century, given that an important, excavated Late Saxon saltern site that operated from around AD 900 to the

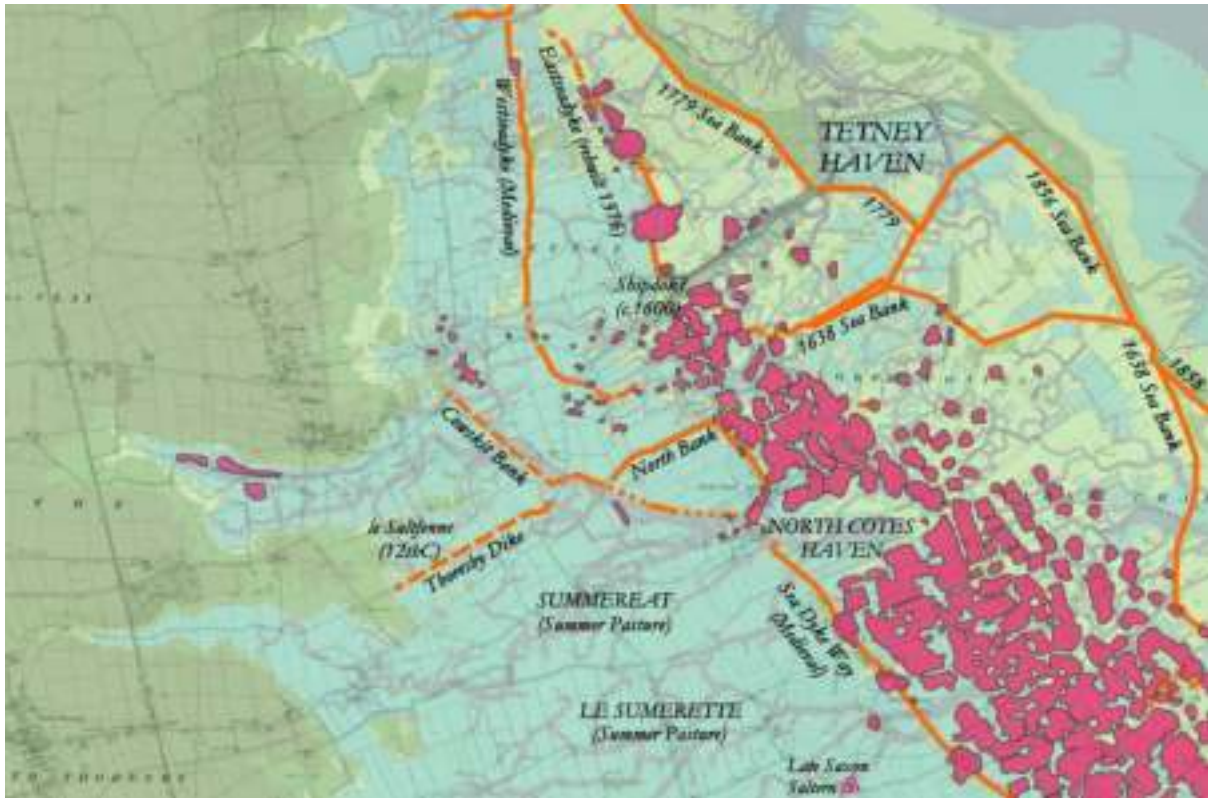


Figure 62: Map of the area from Tetney to Marshchapel, showing the location of the Late Saxon saltern at Marshchapel, along with all the medieval saltern mounds identifiable in this area (marked in pink) and the certain and possible sea-banks. Note, the line of Northcotes Haven can be traced both sides of the saltern mounds that cover the area to the east of Sea Dyke Way.

earlier twelfth century was located on one of these palaeochannels and made use of the saltwater that flowed through it.<sup>249</sup> As such, the coast must have remained partially open here, with no sea-bank and attendant sea-slucce, up to at least this date, otherwise this industrial centre would have been cut off from its supply of seawater.<sup>250</sup> How long the creeks here continued to flow after this is unclear, but it is worth noting that a fairly thick layer of alluvium was deposited on top of the tenth- to twelfth-century site after its abandonment, which is suggestive,<sup>251</sup> and there is a gap in the distribution of later medieval saltern mounds located to the seawards of Sea Dyke Way where the roddon would have run, suggesting that it was still active when the first generation of these mounds were being created. All of this does, of course, fit with the documentary evidence that shows that the present-day Marshchapel was once known as Fulstow Marsh (*Fullestone merske, marisco de Fulestone*) and was originally simply the marshland belonging to that inland parish. The name Marshchapel is, in fact, only recorded from the fourteenth century, though a chapel here is first mentioned in *c.* 1270,<sup>252</sup> and it has been argued that Marshchapel only became a separate economic and social unit from the mid-thirteenth century (although the inhabitants were still not allowed to bury in the chapel there in 1390 and the present church, with burial rights, was not constructed until the early fifteenth century).<sup>253</sup>

<sup>249</sup> Ellis *et al*, *Lincolnshire Marsh*, pp. 137–58. Note, this site is of considerable regional importance, but is not currently included in the Lincolnshire HER, although medieval finds from the same area are, Lincolnshire HER MLI43720.

<sup>250</sup> Green, *Origins of Louth*, p. 103.

<sup>251</sup> Ellis *et al*, *Lincolnshire Marsh*, p. 154.

<sup>252</sup> Cameron, *Place-Names of Lincolnshire 4*, pp. 113–14.

<sup>253</sup> D. M. Williamson, ‘Some notes on the medieval manors of Fulstow’, *Lincolnshire Architectural and Archaeological Society Reports and Papers 4* (1948–51), 1–55; Maybury, *Marshchapel 1540–1640*, p. 22. As Fenwick, *Lincolnshire Marsh*, pp. 189–90, notes, the scenario at Marshchapel, whereby the Outmarsh belonging to a Middle Marsh parish is colonised from there and then eventually develops into a settlement in its own right, ‘partitioning off the eastern end of the earlier parish structure’, may apply elsewhere along the coast, although it is best evidenced here; see also Thirsk, *English Peasant Farming*, pp. 51–3.

In sum, it seems likely that the land in this area was desalinated at some time in the twelfth or thirteenth centuries, with a sea-bank along Sea Dyke Way only constructed in this area then, probably after the first ‘row’ of large medieval saltern mounds that run seawards of it had been created. Of the two, the former century is more probable, as the earliest reference to one of the straight drainage channels that replaced the creeks, the Land Dike (*Langedic*, here ‘the long dyke or watercourse’), comes from a document of 1160–70.<sup>254</sup> Incidentally, even after this the landscape is likely to have remained distinctly wet. The 1595 Haiwarde map shows that the eastern part of Fulstow parish and western part of Marshchapel were originally laid out in ‘long lands’ or ‘long dales’, reflecting subdivisions of common wetlands,<sup>255</sup> and the whole area here was known from at least the thirteenth century as the great pasture of Sumerette, a name that seems to indicate areas of seasonal wetland grazing and, possibly, ‘salt-marsh recently taken in’.<sup>256</sup> How much earlier than the early medieval period this network of creeks is likely to be is difficult to say. However, the Romano-British site in Marshchapel mentioned above seems to have been associated with a palaeochannel that would seem to be the one still visible on the Lidar,<sup>257</sup> suggesting that the visible pattern goes back at least this far, and the geological data suggests that this whole area flooded very early in the prehistoric period, probably in the Late Mesolithic (c. 5000 BC or so), raising the possibility that these creeks are a very ancient landscape element indeed, although they are likely to have changed and shifted somewhat over time.

The second major roddon here is the large channel, around 200m wide, that runs through North Cotes and then on to Tetney, apparently representing the early course of the Waithe Beck/Tetney Drain before it was redirected at some point to flow through Tetney Haven, and the Marshchapel creek system looks like it connected with this channel on its way to the sea. The settlement of North Cotes, which sits atop medieval saltern mounds associated with this channel, is first mentioned in 1115, though its name indicates that it was originally simply the ‘northern saltmaking-huts’, named with respect to Fulstow and its marsh,<sup>258</sup> and this large channel can be almost certainly identified with the medieval Northcotes Haven, or *portum de Nortcotes*, first mentioned in 1275.<sup>259</sup> Although this port is often thought to have been in notable decline since the thirteenth century, there were significant numbers of ships recorded there in the mid-fourteenth century (perhaps because Saltfleet was temporarily unavailable), and the Northcotes creek clearly still existed in the sixteenth century, as it was under official watch for pirates at that time.<sup>260</sup> What is particularly striking, though, is the fact that an exceptionally large gap was left in the distribution of later medieval saltern mounds for this channel to exit through, showing that it must have continued to exist for several generations of these industrial mounds.

Quite when this haven ceased to be an active marine channel is unfortunately not entirely clear. Certainly, the last generations of saltern mounds block the channel, implying that the latest references to Northcotes Haven must refer to the more seaward parts of the creek, traces of which very clear indeed as a wide down-cut feature in the Lidar data, with the sea-bank that cuts this off having been built in 1638.<sup>261</sup> Equally interesting are the traces of banks that Grady identifies on the edges of the channel to the west of North Cotes village, which can be seen on the annotated landscape map of the area (fig. 62).<sup>262</sup> Like the Dudic Bank on the Schalflet (Addlethorpe), these look very much like they were intended to constrain this trunk channel and perhaps prevent

<sup>254</sup> Cameron, *Place-Names of Lincolnshire 4*, pp. 79–80. All other references to these channels date from the early fourteenth century onwards, e.g. Cameron, *PNL 4*, p. 118, and Williamson, ‘Medieval manors of Fulstow’, p. 39.

<sup>255</sup> Walshaw, ‘An ancient Lincolnshire map’; Maybury, *Marshchapel 1540–1640*; Gardiner, ‘Dales, long lands’.

<sup>256</sup> Williamson, ‘Medieval manors of Fulstow’, pp. 36–7, 39, 45; Cameron, *Place-Names of Lincolnshire 4*, pp. 82, 118, and see Simmons, *Fen and Sea*, pp. 112–13, 144–5, for the suggestion that the second element in this name as used on the Lincolnshire Marsh refers to ‘salt-marsh recently taken in’.

<sup>257</sup> Ellis *et al*, *Lincolnshire Marsh*, pp. 132–7.

<sup>258</sup> Foster and Longley, *Lincolnshire Domesday*, p. 247; Cameron, *Dictionary*, p. 33.

<sup>259</sup> Cameron, *Place-Names of Lincolnshire 4*, pp. 143–4.

<sup>260</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 55, 95, 111–12, 113–14, 138, 141, 322.

<sup>261</sup> Grady, ‘North-east Lincolnshire’, p. 87 (fig. 4).

<sup>262</sup> Grady, ‘North-east Lincolnshire’, pp. 87 (fig. 4) and 89 (fig. 5).

it from flooding the lands to the north, which were probably the early fields of the medieval settlement of North Cotes, with traces of ‘long lands’ and ridge and furrow agricultural activity here (these fields seem to be protected by another bank to the north named ‘North Bank’ too, which together with the salterns on which North Cotes stands would have fully enclosed this area).<sup>263</sup> Indeed, one of these banks looks to have deliberately separated the main trunk channel from its upstream portions, suggesting that at some point it was deliberately cut-off by the local inhabitants, with the fresh waters that previously fed into it being probably redirected to Tetney Haven through some of the other visible channels to the north.<sup>264</sup> Perhaps the best explanation for this is that it was done as part of a scheme to dewater the lands to the south of the banks, and Thoresby Dike, which runs from the Middle Marsh almost to this bank, may also have been part of this scheme (it forms the parish boundary between North Thoresby and Tetney, so is likely to have been of some significant antiquity). If so, then it may have been done sometime around the twelfth century, when Marshchapel/Fulstow Marsh looks to have built its sea-bank and reorganised its drainage system, and it seems credible that the portion of Sea Dyke Way that cuts across this channel may also date from this period, leaving only the creek seaward of this (between the saltern mounds) as the active medieval *portum de Nortcotes*.

The final area to look at in terms of creeks is that between Tetney and Humberston. The Tetney valley was clearly of considerable importance in the prehistoric era, with significant evidence for Bronze Age activity here, including multiple barrows and a recently excavated Bronze Age timber coffin.<sup>265</sup> At the time that these cemeteries were constructed by and overlooking the river, the valley had already been inundated to a significant degree by the rising sea,<sup>266</sup> and it is likely that something approaching the creek system flowing out of the valley



Figure 63: Looking eastwards towards a medieval saltern mound at Poor’s End, Grainthorpe, which rises above the surrounding landscape to a maximum elevation of between 5 and 6m OD. This saltern mound lay next to Swine Dike and within the suggested area of the early medieval Swine Haven.

<sup>263</sup> North Bank is first mentioned in 1609 (Cameron, *Place-Names of Lincolnshire*, p. 145); for the medieval fields here, see the Six Inch OS map for the traces of ‘long lands’ and also Lincolnshire HER MLI87657 (ridge and furrow earthworks).

<sup>264</sup> This bank cutting across the Northcotes Haven in the west is identified by Grady, ‘North-east Lincolnshire’, p. 89 (fig. 5) but not discussed; the break in the middle of the bank where it goes across the trunk channel is simply due to the excavation here of the Louth Navigation in the eighteenth century and doesn’t indicate that it is only a possible bank.

<sup>265</sup> Lincolnshire HER MLI82149 (Bronze Age log coffin); MLI87666, MLI82138 and MLI125571 (Bronze Age barrows).

<sup>266</sup> See Berridge and Pattison, *Grimby and Patrington*, p. 64 (fig 28b), and below.

and past North Cotes was already in existence at this point—certainly, the geological evidence suggests that the main creek/roddon was an extremely ancient landscape feature that had been present here since probably the Late Mesolithic, and it may well follow the line of the pre-flood Waithe Beck/Tetney Drain. The period to which the Tetney valley remained open to the sea is an intriguing question. The valley bottom west of the village has soilmarks that have been confidently interpreted as those of large saltern mounds that ‘date from the Medieval period or later’ (*i.e.* post-1050/1100), making these the most westerly and inland examples of this monument type known from this part of the Lincolnshire Marsh, and whilst these were in operation the valley must necessarily have been under marine influence.<sup>267</sup> Also suggestive of a relatively late date for marine influence is the fact that the southern portion of Tetney parish between Outholme Lane and Thoresby Dike was known as *le Saltfenne* in the middle ages.<sup>268</sup> Unfortunately, neither piece of evidence is capable of giving an absolutely secure dating, but together they support the notion outlined above that the area south of North Cotes was protected by the sea, but the area to the north, *i.e.* Tetney, was left open to it for a period. Certainly, it is worth noting that base elevation of the Outmarsh plain, as depicted on Lidar, is slightly but noticeably higher to the north of both Thoresby Dike and North Bank (North Cotes) than it is to the south, which would be what we would expect if the above was the case. Likewise, the area east of Cowskit Bank (see fig. 62)<sup>269</sup> is noticeably higher again, suggesting that this bank may have an early origin as the initial line of sea-defence. The sinuous bank identified by Grady as being partly preserved by Newton Marsh Lane with a curving southern extension associated with saltern mounds, would then be a slightly later sea defence here, and it was presumably to the east of this that a *Shipdok* was recorded in around 1600.<sup>270</sup>

Looking to the north, several points can be made. The first is that the sinuous, down-cut line of Tetney Drain prior to its straightening to create Tetney Lock and the outfall of the Louth Navigation stands out very clearly on the Lidar evidence. Whether it was there prior to the closing and silting of the North Cotes channel is unclear, but it is interesting to note that the only potential late-prehistoric/Romano-British saltern remains (briquetage) from this area come from beside the channel plotted here.<sup>271</sup> Further

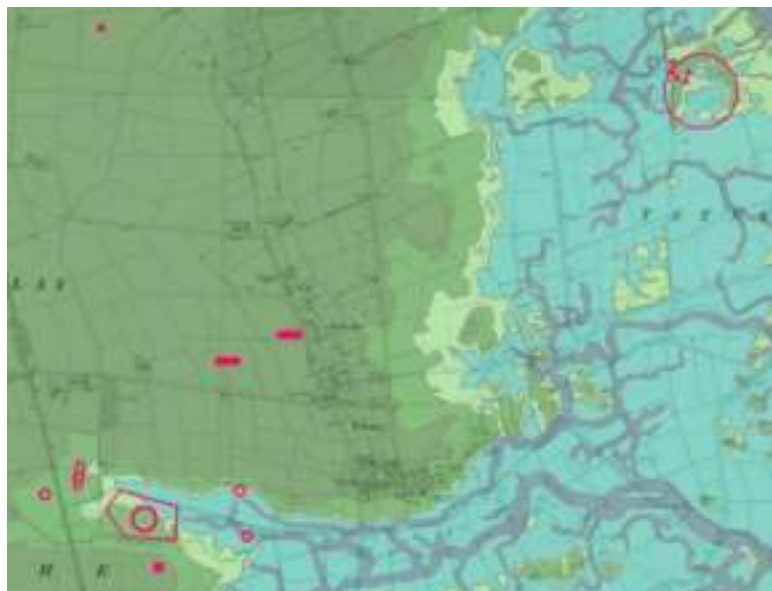


Figure 64: Bronze Age finds in the area around Tetney. Late Bronze Age salt-making activity is marked to the top right (based on the HER's area-marking and reported finds of briquetage), whilst small open circles and associated polygons represent Bronze Age burials and cemeteries; rectangles are axes and squares other flint finds.

<sup>267</sup> Ellis, *Lincolnshire Marsh*, pp. 128–9.

<sup>268</sup> K. Cameron, *The Place-Names of Lincolnshire, Part 5: The Wapentake of Bradley* (Nottingham, 1997), p. 159; E. Russell and R. C. Russell, *Making New Landscapes in Lincolnshire: The Enclosures of Thirty-Four Parishes* (Lincoln, 1983), p. 97.

<sup>269</sup> Cowskit Bank is not mapped by Grady, ‘North-east Lincolnshire’, but it was considered to be an ancient sea-bank (a ‘Roman Bank’) by the Rev. J. Wild in his *Tetney, Lincolnshire: A History* (Grimsby, 1901), and the Outmarsh floor does appear to be somewhat higher to its east than its west, suggesting that it, or some earlier version of it on a similar orientation but perhaps more sinuous, did indeed act as a sea-bank cutting off the Tetney valley from the sea.

<sup>270</sup> Grady, ‘North-east Lincolnshire’, p. 88 and fig. 5—note, the land surface is very slightly higher to the east of the Newton Marsh Lane bank too. For the *Shipdok*, see Thirsk, *English Peasant Farming*, p. 63, and Pawley, *Lincolnshire Coastal Villages*, pp. 94–5.

<sup>271</sup> Lincolnshire HER MLI89112 (an ‘undated’ saltern site; the presence of briquetage indicates that it must be Romano-British or earlier, see Lane, *Coastal Salt-Making*) and MLI41226 (dated to the medieval period on the HER, but if it does have briquetage then likely earlier or perhaps a medieval saltern on a site previously used for salt-making<sup>2</sup>).



north still, the channels are harder to discern, and often only down-cut, although there is a clear roddon in Humberston parish that must represent an earlier Humberston Beck. In part, the issue may simply be that the Outmarsh sediments are much shallower in this area than further south.<sup>272</sup> Nonetheless, there is still much of interest, not least the fact that the area around and to the east of Newton Marsh Lane, where there is a slight rise of glacial till, has produced evidence for Late Bronze Age salt-making in the Outmarsh using the same techniques as were utilised in the Iron Age and Romano-British eras.<sup>273</sup> Likewise of note is the fact that line of the medieval sea-bank preserved as Newton Marsh Lane, where it carries on northwards to Humberston, appears not only to reflect the medieval coastline, but also perhaps the Romano-British one, which seems to have been in this same position as this.<sup>274</sup>

The other major Lidar feature aside from the channel networks is, of course, the extremely large expanse of medieval saltern mounds in this map-view. These mounds, some standing 6m above sea-level and being tens of metres across, initially acted as dry islands in the coastal marshes and the main body of these form a substantial block lying mainly seawards from the Sea Dyke Way between North Cotes and Grainthorpe, measuring about 7km long from Tetney Lock to Grainthorpe (NW–SE) and around 2km in width at the widest point (SW–NE), with a further block to the north of the Louth Navigation. As has been discussed a number of times,<sup>275</sup> these are the products of the medieval salt-making industry, and they form a low plateau several metres higher than the surrounding land, with the earliest salterns tending to merge together whilst the final generation, located furthest east, still stand as separate ‘islands’. The process by which they were constructed is set out on Haiwarde’s



Figure 65: The raised platform of a saltern mound at Eau Bank End, North Somercotes, which rises to around 5m OD at its highest; note, the name ‘Bank End’ and the neighbouring area of North Somercotes called ‘The Bank’ has been taken to imply the existence of some sort of sea-bank here, perhaps late medieval or early modern in date, see fig. 55.

<sup>272</sup> See Berridge and Pattison, *Grimby and Patrington*, p. 63 (fig. 27); this is confirmed by the survey of boreholes undertaken for this project.

<sup>273</sup> Lane, *Coastal Salt-Making*, pp. 68–9, 109; C. Palmer-Brown, ‘Bronze Age salt production at Tetney’, *Current Archaeology* 136 (1993), 143–5; Lincolnshire HER MLI43081.

<sup>274</sup> Lindsey Archaeological Services, *Newton Marsh Sewage Treatment Works, Tetney, Lincolnshire: Archaeological Monitoring of Project Clear Water '95* (1995), pp. 44–5. The same is probably true of Sea Dyke Way, see Fenwick, *Lincolnshire Marsh*, pp. 192, 306, who argues the line of settlements from North Cotes to Grainthorpe developed on the very slightly raised ground found here that reflects the outer edge of Romano-British coastal marshes.

<sup>275</sup> See, for example, Grady, ‘North-east Lincolnshire’; Berridge and Pattison, *Grimby and Patrington*, p. 72; Lane, *Coastal Salt-Making*; Fenwick, *Lincolnshire Marsh*.



Figure 66: An aerial view of the area seawards of Sea Dyke Way between North Cotes and Marshchapel, showing a wide band of cropmarks and soilmarks trending NW to SE across the middle of the photograph, which are formed by the saltern mounds of this district (Source: Google Earth image from 2011, Maps data © 2022 Google, Image © 2022 Maxar Technologies).

1595 map of Marshchapel, which recorded the last generation of this major salt-making industry prior to its end shortly afterwards:

The round groundes [saltern mounds] at the Easte end of Marshchappell are called mavres and are firste framed by layenge together of great quantities of moulede [sand and silt from the high tide line] for the making of Salte. When the mavres grow greate the Salt makers remove more Easte and come nearer to the Sea and then the former mavres become in some fewe years good pasture groundes. Those that have the Cotages nowe upon them are at the presente in use for salt.<sup>276</sup>

The plateau that built up along the shore is one of the most dramatic large-scale human alterations of the landscape in the region, and it acted to push the shoreline and saltmarshes ever further out seawards, allowing large areas to be reclaimed by the process Haiwarde described and then, from the seventeenth century, by the enclosure of the saltmarshes to their east. Several particularly interesting aspects of the Lidar evidence relating to these mounds can be enumerated. First, by giving us a fuller picture of the extent of the mounds than is otherwise available from aerial photos and geological mapping,<sup>277</sup> it allows us to assess the full extent of this new landscape unit, showing just how substantial it actually is, and incidentally just how good Haiwarde's 1595 mapping of them was, which matches up with the Lidar image of the Marshchapel area extraordinarily well.<sup>278</sup> Second, even though the earliest (most inland) of the salterns that make up the block have merged together and been somewhat reduced in height due to ploughing, the Lidar still allows us to identify the multiple 'lines' or generations of these mounds. Third, as noted in the preceding narrative, there are distinct gaps left in these 'lines' that seem to suggest the presence of significant creeks that were left unblocked for multiple generations of salterns, with the ones that seems to have been left open longest being Northcotes Haven and the potential early Swine Haven. Fourth, the Lidar clearly shows that the line of the Sea Dyke Way that runs behind this wide block goes through multiple salterns of the earliest generation, strongly supporting the view that the saltern mounds

<sup>276</sup> Walshaw, 'An ancient Lincolnshire map', p. 198.

<sup>277</sup> See Grady, 'North-east Lincolnshire' for the former and British Geological Survey, *Sheet 90 including sheet 91* for the latter.

<sup>278</sup> Lane, *Coastal Salt-Making*, p. 115.

preceded the bank, and that the latter was probably constructed in stages, linking these pre-existing mounds together in order to complete the *ad hoc* sea-defence that the mounds provided by their existence.<sup>279</sup>

In addition to the main blocks either side of the Louth Navigation and down to the Lud gap between Grainthorpe and North Somercotes, there are also significant numbers of other—more indistinct and generally (though not always) smaller—saltern mounds in parts of this map-view. One block, well inland in the Tetney valley has already been mentioned, but the same parish includes a wide scatter of such salterns inland of the main block.<sup>280</sup> This may well reflect the fact that the landscape here may have been left somewhat open to the sea for a longer period of time than elsewhere on this coast, allowing the construction of salterns to the west of main saltern landscape. Alternatively, they have been interpreted as the earliest salterns in the region, raised before the industry started to create the main block,<sup>281</sup> although this might struggle to fit with the medieval date assigned to the most westerly salterns in the Tetney valley. Nonetheless, it could be true, and is in fact very likely to be so for those mounds that stand behind Sea Dyke Way further south, such as the saltern mound upon which Marshchapel's fifteenth-century church stands (and presumably where its earlier thirteenth-century chapel stood too).<sup>282</sup> As to the chronology of these large mounds, along the Wash coast the earliest seem to date from



Figure 67: The fifteenth-century St Mary's Church, Marshchapel, sometimes called the 'Cathedral of the Marsh'; this was probably built on the same site as the earlier chapel and it appears to sit atop a medieval saltern mound (Source: [Geograph](#), image copyright © Neil Theasby and used under a [CC BY-SA 2.0](#) license).

<sup>279</sup> See Grady, 'North-east Lincolnshire', pp. 86, 88; Owen, 'Salt, sea banks', pp. 45–6.

<sup>280</sup> The mapping of these on the map of the Tetney area showing salterns and banks included here is based on the British Geological Survey, *Sheet 90 including sheet 91*; Grady, 'North-east Lincolnshire'; and the results of the Hornsea Offshore Wind Farm Project Two, which revealed further ploughed-out salterns here—RPS Group/SMart Wind, *Hornsea Offshore Wind Farm Project Two – Environmental Statement Volume 6 - Onshore Annex 6.6.3 – Geophysical Survey Report* (2015) and *Hornsea Offshore Wind Farm Project Two – Environmental Statement Volume 6 - Onshore Annex 6.6.5 – Trial Trenching Report* (2015).

<sup>281</sup> Grady, 'North-east Lincolnshire', p. 88.

<sup>282</sup> British Geological Survey, *Sheet 90 including sheet 91*.

the Late Saxon period and the same may well be true here, with pottery of 1050–1100 AD recovered from the firing chamber of a hearth on a salt-mound at Tetney,<sup>283</sup> although it is worth noting that they used a different method of salt-extraction to the more-inland Late Saxon saltern excavated at Marshchapel, which probably began to function just after AD 900.<sup>284</sup> As for their latest stages, there is little evidence from the Lidar of the Marshchapel area to show any further development of the industry after Haiwarde's map of 1595, and whilst the industry was clearly still functioning then, it almost certainly came to end in the early seventeenth century as a result of competition from Scottish and Newcastle salt, which was cheaper to make due to the ready availability of coal.<sup>285</sup>

Finally, mention ought to be made of the landscape features seen to seaward of these mounds on Lidar. This shows a substantial area of reclaimed saltmarsh, criss-crossed by a large number of mainly down-cutting channels. Some of these clearly link up with the major channels identifiable inland, notably the wide down-cutting feature along which Waterland Drain flows beyond the salterns in Marshchapel parish, which from its width and orientation was clearly part of the Northcotes Haven channel system. This is cut off by a clear sea-bank that was constructed in 1638 in order to reclaim the land behind it,<sup>286</sup> but after this its line is preserved by a smaller down-cut channel that flows through an area reclaimed in 1858 to ultimately join the eighteenth-/early nineteenth-century Grainthorpe Haven, and it seems credible that something similar occurred in the medieval period and before too. Other down-cut channels around Tetney Haven are also of considerable interest. The twisting course of the Waithe Beck/Tetney Drain prior to the eighteenth-century creation of the Louth Navigation has already been noted; how ancient this might be is unclear, but there was a *Shipdok* further up it around or inland of Tetney Lock in the late sixteenth century and a name that appears to mean Tetney (*Teteneschale*) is mentioned as a port on the Lindsey coast by Roger of Howden in the late twelfth century, which it is hard not to associate with this feature or an earlier version of it.<sup>287</sup> To the east of this channel is another significant down-cut channel, which formed the outflow for the waters of the Old Fleet Drain, a name indicative of an origin in a saltmarsh environment. This flows from North Thoresby to North Cotes (where it was probably originally a tributary of the Northcotes Haven) and then along the line of the former Northcotes Haven before turning north to the Tetney Haven outfall, although one may suspect that the latter stage may be a redirection of its flow after the medieval silting and blocking of Northcotes Haven. This outfall also seems to have a branch that flowed through the slight gap in the saltern mounds visible just to the south of Tetney Lock. A small undated bank between two salterns blocking this gap suggests its reality as a former channel passing through the medieval saltern block, but the current width of the gap as seen on Lidar is probably illusive, as archaeological and survey work suggests that salterns were in place there but are just now very eroded.<sup>288</sup>

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<sup>283</sup> T. Lane, 'The King's Lynn Salterns: a view from Lincolnshire' (forthcoming).

<sup>284</sup> Lane, *Coastal Salt-Making*, pp. 84–6, 113.

<sup>285</sup> C. Sturman, 'Salt-making in the Lindsey Marshland in the 16<sup>th</sup> and early 17<sup>th</sup> centuries', in N. Field and A. White, *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 50–6; E. H. Rudkin and D. M. Owen, 'The medieval salt industry of the Lindsey Marshland', *Lincolnshire Architectural and Archaeological Society Reports and Papers*, 8 (1960), 76–84; Grady, 'North-east Lincolnshire', p. 86.

<sup>286</sup> See Robinson, 'Coastal evolution', p. 64ff for details of the reclamations on this stretch of coast.

<sup>287</sup> Hughes, 'Roger of Howden's sailing directions', p. 589. There seem to be relatively few mentions of Tetney Haven in the medieval record; Pawley, *Lincolnshire Coastal Villages*, comments on it briefly (pp. 94–5) and further notes that the creek here was under watch for piracy in the second half of the sixteenth century (p. 131). The impression given is that this was always a minor port, compared with the Northcotes, Grainthorpe/Swine and especially Saltfleet havens, with its modern importance only coming with the construction of the Louth Navigation in the eighteenth century.

<sup>288</sup> Grady, 'North-east Lincolnshire', p. 89 (fig. 5); RPS Group/SMart Wind, *Geophysical Survey Report and Trial Trenching Report*.

## 5 The coastline from Humberston to Grimsby

This is the smallest map-view and one about which there is least to say, at least in terms of what the Lidar and aerial photo evidence can tell us, due to the narrowness of the marsh here and the significant nineteenth- and twentieth-century development that has taken place on this coastline. Key points relating to the evidence from this map-view include the following:

- Very few palaeochannels are visible on Lidar in this part of the project zone, as noted above, although there is a little evidence of them in the area to the west of Grimsby and there seems to be a large, sinuous depression running westwards from the coastline.
- Aerial photography is primarily of use to show the development of the holiday coast in this area, rather than identify early landscape features, and for the former the successive maps of the Ordnance Survey are arguably more use and were used in preference.
- Early photographic and drawing evidence does offer some interesting insights into the pre-development coast at Cleethorpes, especially those showing the clay cliffs before their modification. Early mapping, including the speculative early nineteenth-century mapping of Grimsby marsh published by Oliver, is also of some use, as are a number of antiquarian local histories and references to the region.<sup>289</sup> Likewise, Grimsby is well-served by more modern historians, as well as early documentation relating to the town.
- Geological evidence is particularly useful in this area, given its highly developed character. A complete survey of the borehole evidence, along with the British Geological Survey's mapping of glacial deposits, allowed a rough reconstruction of the landscape in the prehistoric era to be attempted that helps fill in some of the gaps in the absence of significant Lidar input.

As noted above, no roddon systems are visible in this map-view, although this doesn't mean the Lidar data is without utility. The primary feature visible is the large peninsula of glacial till which curves in from the Middle Marsh at Humberston to close off the Lincolnshire Outmarsh. This then forms two distinct blocks of high clayland that originally reached out to the open sea-shore here, with straight-sided erosion faces at this point and the marshy river-valley of the Buck Beck lying between them. The cliffs here reach a maximum height of around 15m OD, well above anything else in the project study zone, and the high top of this mass appears to have been used in the medieval period not only for settlement, but also, perhaps, for civil defence. Thus the beacon of Beacon Hill, Cleethorpes, was apparently in use from at least 1377<sup>290</sup> and, perhaps more interestingly, a *Burghill* is recorded in this parish in 1348.<sup>291</sup> This last name seems rather suggestive of a possible element of early coastal defence here, containing as it does the Old English name-element *burh*, 'fortification' + *hyll*, and this suggestion is strongly supported by the presence of a *\*tōt-ærn-hyll* in the minor names of the parish too (*Toternil hill, Tottere*).<sup>292</sup> This last contains the Old English term *tōt*, 'look-out', to give a full name of 'the look-out house hill'; places with such names are believed to be associated with Anglo-Saxon-era civil defence and responses to the threat of Viking coastal raiders from the late eighth century onwards.<sup>293</sup> In this context, it is worth noting that further

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<sup>289</sup> G. Oliver, *The Monumental Antiquities of Great Grimsby* (Hull, 1825) is of particular note for being both an early antiquarian account of Grimsby, albeit somewhat fanciful, and for providing a map—by the Rev. W. Smith—of the marshland features that, whilst dubious in places, has much of interest.

<sup>290</sup> C. F. C. Hawkes, 'Prehistoric Lincolnshire', *Archaeological Journal* 103 (1946), 4–15 at p. 6.

<sup>291</sup> K. Cameron, *The Place-Names of Lincolnshire, Part 5: The Wapentake of Bradley* (Nottingham, 1997), p. 31.

<sup>292</sup> Cameron, *Place-Names of Lincolnshire* 5, p. 33.

<sup>293</sup> See J. Baker and S. Brookes, 'Signalling intent: beacons, lookouts and military communications', in M. C. Hyer and G. R. Owen-Crocker (eds.), *The Material Culture of the Built Environment in the Anglo-Saxon World* (Liverpool, 2017), pp. 216–34, and also J. Baker and S. Brookes, *Beyond the Burghal Hidage: Anglo-Saxon Civil Defence in the Viking Age* (Leiden, 2013).



Figure 68: The area around Grimsby and Cleethorpes as it appears in the Lidar data.

certain or potential *tōt*, ‘look-out’, names are found all along the coastline of this study region, including a Toot Hill in Healing, a Toot Hill at Little Coates on the coast by Grimsby (see below), a *Tuttyll haven*/Tuttle Drain between Tetney and North Cotes (which derives from OE *tōt-hyll*), Tothill and Toot Hill in Tothill parish, Toynton All Saints and Toynton St Peter just above the Fen edge, and further possible ‘Toot’ names in Fishtoft, East Keal, Spilsby, Tattershall and perhaps Gunby/Bratofth parishes.<sup>294</sup> These *tōt* names are not found inland from the drier land overlooking the coastal zone, aside from a single example on a probable major east–west routeway at Middle Rasen (fig. 69), and as such it is difficult not to consider them to be indeed just the sort of Viking-era coastal defence sites that they have been suggested to be.

Turning back to the cliffs at Cleethorpes and Humberston, their erosion by the sea has been documented from at least the seventeenth century. So, in 1697, Abraham de la Pryme recorded the ‘huge cliff at Cleythorpe’ and said that he himself had observed

how the sea washed the cliff away, which is nothing but clay and sand, and is as high as a church steeple; huge pieces is undermined and brought down every great tide as bigg as whole churches together, and the people of the place says that they have, by tradition that there has been several miles length of land wash’d away, and people have been forced to pull down their houses and build them again furder off.<sup>295</sup>

The cliff here is still clear, and whilst it has been subject to considerable development, early drawings and photographs give a good idea of what it must have looked like in De la Pryme’s time. His suggestion that people living here not only saw significant regular erosion, but also recalled having lost a substantial tract of land is likewise to be credited, with geological reconstructions of the area accepting that the peninsula once extended much further out to sea, having lost perhaps a mile in length over the last two thousand years or so and more

<sup>294</sup> Based on a study of the early mapping data in this region, including the 1824 OS maps; Cameron’s *Place-Names of Lincolnshire 5* (pp. 44, 105, 156); and I. Bower, *The Place-Names of Lindsey (North Lincolnshire)* (University of Leeds PhD Thesis, 1940), pp. 54, 157, 450, 456, 479; Green, *Britons and Anglo-Saxons*, p. 159; and Baker and Brookes, ‘Signalling intent: beacons, lookouts and military communications’, p. 219 (map).

<sup>295</sup> A. De la Pryme, *The Diary of Abraham De La Pryme, the Yorkshire Antiquary* (Durham, 1870), p. 155.

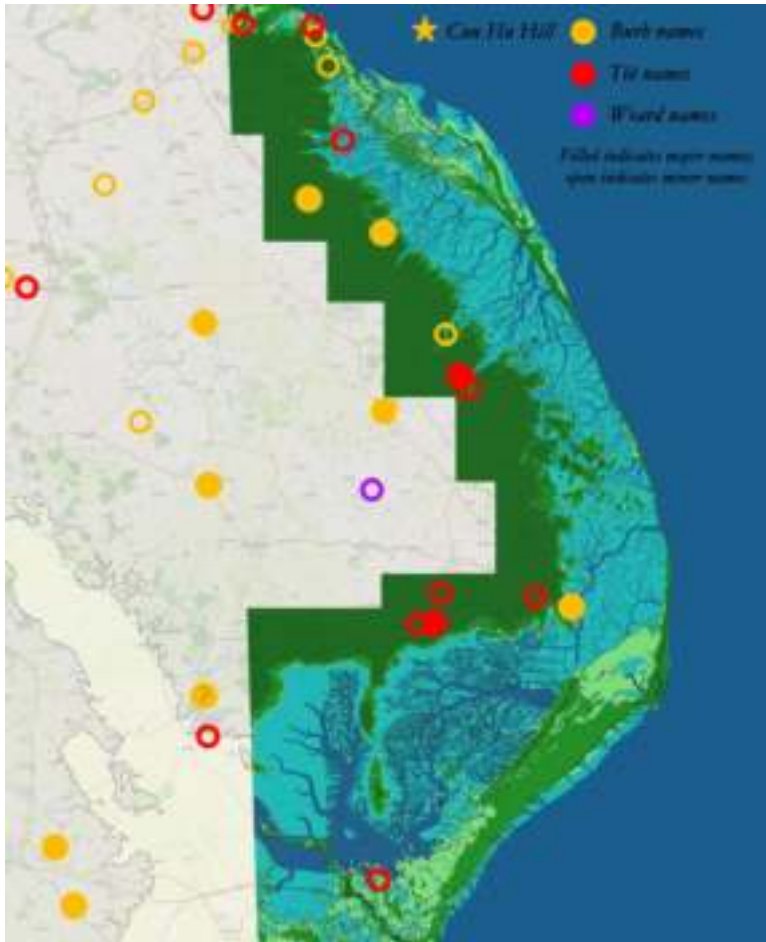


Figure 69: The distribution of Old English *tōt* (red) and *burh* (yellow) names in Lincolnshire; note that the *tōt* names have a clearly coastal distribution, which is of considerable interest, whilst *burh* ('fortification') names are found both at the coast and inland. The probable fortress at Cun Hu Hill, near Grimsby, is denoted by a star and the only possible *weard* ('watch, look-out') name, Warden Hill, is also mapped (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

before this too.<sup>296</sup> This erosion was only finally halted between 1883 and 1885 by the erection of the sea-wall and promenade at Cleethorpes, this being paid for by the Manchester, Sheffield and Lincolnshire Railway in return for being able to use the land on top of the sea-wall as a pleasure gardens and an area for visitor attractions such as swimming baths, shops and refreshment rooms.<sup>297</sup> The coastal defence here was extended to create the Kingsway (formerly Sea Bank Road) in 1903–06 and again in 1912 after further erosion to the south of the nineteenth-century sea-bank, which saw the road running along the top of the cliff disappearing in cliff falls and the houses on the front being under severe threat. This time, however, the Cleethorpes with Thrunsoe Urban District Council had to arrange the construction with Sidney Sussex College (the major landowner) themselves, as the railway company showed no interest in protecting this area. As a result, the new sea



Figure 70: Cleethorpes opposite Spurn Head from the Mouth of the Humber, by Thomas Kelah Wharton, 1830, showing the prominent sea-cliffs here, the only cliffs on the Lincolnshire coast (Source: New York Public Library [MssCol 3306](#), Public Domain).

<sup>296</sup> Berridge and Pattison, *Grimsby and Patrington*, p. 65 (fig. 28), give reconstructions of the Mesolithic, Bronze Age, late prehistoric and medieval coastline in this area, showing a peninsula that originally extended several kilometres out to sea, though note that they don't depict the Buck Beck valley and instead show it as a single peninsula rather than a split one.

<sup>297</sup> R. Neller, 'Skegness, Mablethorpe and Cleethorpes: contrasts of land ownership and investment in the development of seaside resorts', *Lincolnshire History and Archaeology* 47 (2012), 35–47 at p. 45; Robinson, 'Coastal evolution', p. 66.



Figure 71: The cliffs of Cleethorpes in May 1861, with bathing wagons on the beach below.

frontage here was consequently kept free from amusements by the CTUDC, who decided to create a quieter and more ‘genteel’ area in contrast to the resort to the north, although the work to create this—along with its swimming pool (1925) and boating lake (1928)—was delayed until after the First World War.<sup>298</sup> Further sea defences were subsequently constructed in 1930 and in the second half of the twentieth century to protect the area of the coast down to Humberston, creating a coastal walk between the two settlements.<sup>299</sup>

Looking to the south of Cleethorpes, the Buck Beck which divides the high ground of Cleethorpes from that of Humberston can be seen on Lidar to inhabit a wide valley, the floor of which sits between 2 and 3m OD, so below the mean high tide level of spring tides. Unfortunately, modern landscaping in this area obscures much of this floor, although there are hints of the former drainage here in the Lidar data. To the east and south-east of the cliff at Humberston, there is another low-lying area shown. This represents a reclamation of the fitties (Scandinavian *fitjar*, ‘waterside grassland’, *i.e.* saltmarshes used for rough grazing)<sup>300</sup> here, with a large area by the Humberston Wadhouse enclosed by Anthony’s Bank in 1795, against which dune ridges built up to approximately their present seaward limit by about 1830, and then another a large area to its north in 1930 when the sea-defences of Cleethorpes were completed.<sup>301</sup> The reclaimed fitties subsequently saw a number of huts erected on the dunes that had developed here and the formation of the Humberston Fitties Campers’ Association in 1925, so that by 1947 there were 60 huts and bungalows, and by 1956 there were 300 present, with a large caravan park being created on the reclaimed land behind the dunes that is still a very visible feature of the landscape here today.<sup>302</sup>

Regarding the development of the settlements on top of the Cleethorpes clay peninsula in the modern era, the major landscape impact has been the rapid evolution of the landscape from one of a dispersed pattern of

<sup>298</sup> Neller, ‘Skegness, Mablethorpe and Cleethorpes’, p. 46.

<sup>299</sup> N. Grayson, *Lincolnshire Extensive Urban Survey: Cleethorpes and Old Clee* (Lincoln, 2020), p. 8; Robinson, *Lincolnshire Seaside*, p. 66.

<sup>300</sup> R. Coates, *Grimsby and Cleethorpes Place-Names* (Nottingham, 2020), p. 51.

<sup>301</sup> Robinson, ‘Coastal evolution’, pp. 64–5, 67–8.

<sup>302</sup> Robinson, *Lincolnshire Seaside*, p. 150.



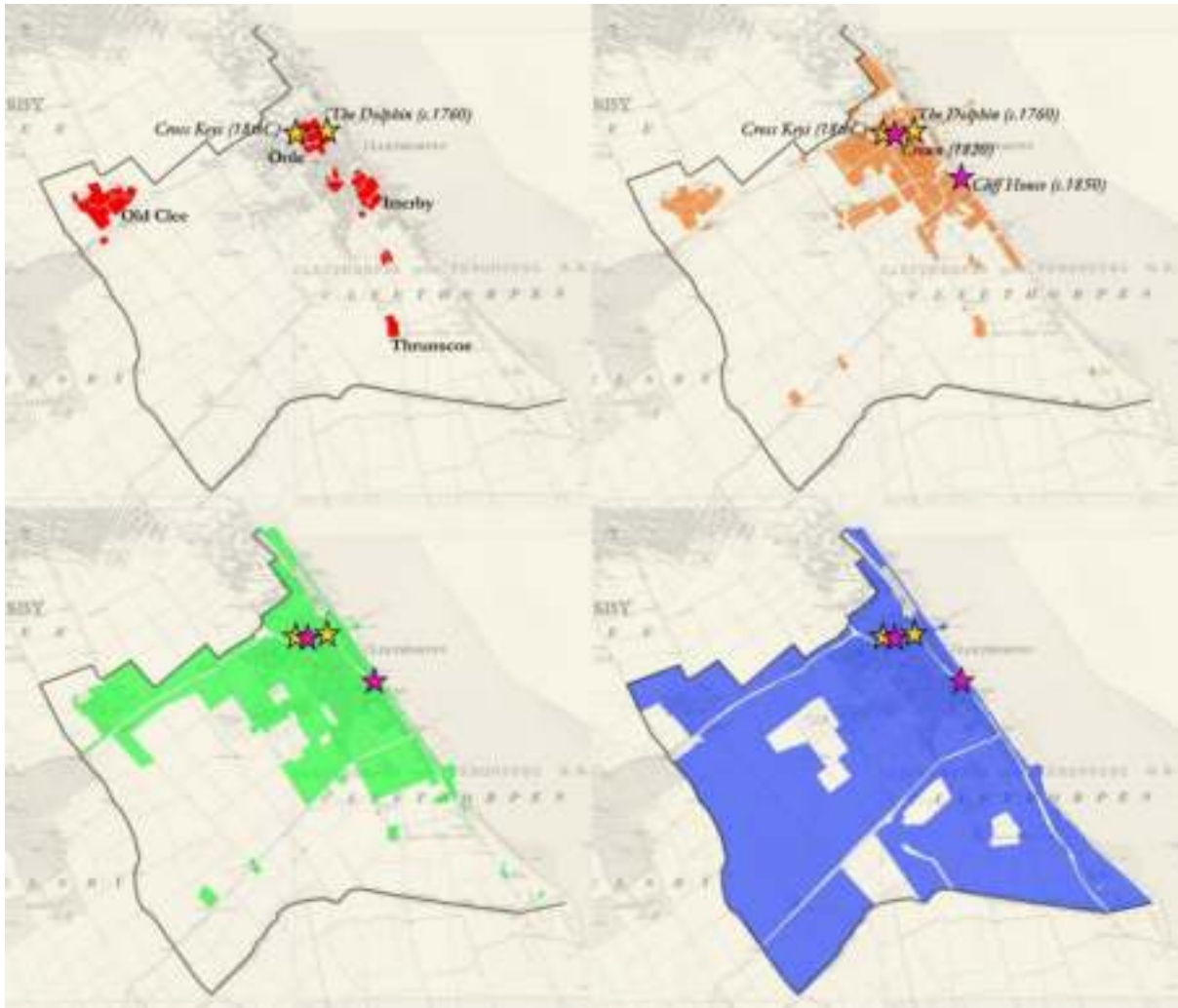


Figure 72: The built landscape of Cleethorpes parish—(a) The four hamlets in the early nineteenth century, along with the two eighteenth-century inns; (b) the growth of Cleethorpes to c. 1900, with pubs and bathing inns founded up to c. 1850; (c) Cleethorpes in the 1950s; (d) Cleethorpes in the 2020s (Base map: OS Six Inch 1909, National Library of Scotland).

small villages/hamlets (Old Clee, Oole, Itterby and Thrunscoe, all within modern Cleethorpes parish) recorded on the OS map of 1824, through to a massive resort town that fills the entire parish. As was noted above, the origins of Skegness, Cleethorpes and Mablethorpe/Sutton-on-Sea can all be found in the later eighteenth century, when they became home to fashionable Georgian sea-bathing inns and hotels, which then formed the seeds around which the great resort towns of the Lincolnshire coastline grew. At Cleethorpes, for example, the initial bathing-inn of the Dolphin Inn/Cleethorpes Hotel (founded c. 1760) was joined by only 2 or 3 lodging-houses in 1803 in providing services for those wealthy visitors wishing to stay there and partake of the waters—with Cleethorpes declared to be, in the summer, ‘the resort of much genteel company, it being universally allowed to be the most eligible and agreeable bathing place on the Lincolnshire coast’ in 1805<sup>303</sup>—but by the middle of the century the resort had started to blossom, with two further bathing inns, 106 lodging-houses, and 1,300 visitors at a time in the 1850s.<sup>304</sup> The major factor that allowed Cleethorpes to grow from this into a true town was, of course, the connection of this resort to the nineteenth-century railway network, something that was arguably influenced by the proven and continuing popularity of Cleethorpes with bathers and tourists. Cleethorpes got its branch line first of all the Lincolnshire coastal ‘new towns’ in 1863, aided by its proximity to the major port of Grimsby, and subsequently 30,000 people arrived by train on 3 August that year, along with

<sup>303</sup> C. Cooke, *Topographical and Statistical Description of the County of Lincoln* (London, 1805), p. 107.

<sup>304</sup> Robinson, *Lincolnshire Seaside*, pp. 58–9.

another 10,000 who arrived via the roads, and by the end of the nineteenth century it was home to 38,978 people.<sup>305</sup> The subsequent growth of the town can be traced via the published OS maps of the nineteenth and twentieth centuries, along with recent aerial photography, with this showing a dramatic expansion of the urban landscape through to the 1950s and then again by the early twenty-first century (fig. 72).

North of the clay peninsula that Old Clee, Oole, Itterby and Thrunscoe all sat upon is what looks like a moderate expanse of Outmarsh that has been almost entirely covered by the modern-era growth of the towns of Grimsby and Cleethorpes. Very little can be added to the British Geological Survey mapping of this area from the Lidar record, other than to confirm that, prior to the urbanisation of this area, it is likely to have been a landscape of low-lying saltmarshes and islands/promontories made up of glacial deposits, with the latter being the focus for medieval and earlier settlement off of the main peninsula—Grimsby was founded on one of these, as was Little Coates. The only additional information offered by the Lidar is the presence of what looks like the ghost of a wide, down-cut channel stretching east from the coastline and across to the south of the island upon which the medieval town of Grimsby was built. This seems very likely to be the much-doubted East Haven that was recorded by Oliver in the early nineteenth century and whose mouth also features on a map of Grimsby before its enclosure as the ‘Old East Haven’, where it is depicted as the eastern boundary of the parish (fig. 74).<sup>306</sup> Interestingly, the marsh here was clearly of considerable importance to the commoners of both Cleethorpes and Grimsby right into the modern era, with the Freemen of Grimsby and the Cleethorpes Commoners apparently contesting the exact boundary of their liberties on the coast here—along with the associated rights of grazing on 69 acres of Common—throughout the early nineteenth century. This dispute lasted until the boundary between the two was definitively fixed on the ‘Blue Stone’ after a trial at the Lincoln Assizes in 1830, which went against



Figure 73: The Dolphin Hotel (top left) and Promenade, Cleethorpes, from an early twentieth-century coloured postcard.

<sup>305</sup> Neller, ‘Skegness, Mablethorpe and Cleethorpes’, pp. 43–7; A. Dowling, *Cleethorpes: The Creation of a Seaside Resort* (Chichester, 2005); Robinson, *Lincolnshire Seaside*, pp. 58–9, 65–6.

<sup>306</sup> Oliver, *Monumental Antiquities of Grimsby*, map in front and pp. 37–8; A. Bates, *A Gossip About Old Grimsby* (Grimsby, 1893), map in front and p. 11. The existence of this ‘haven’ has been frequently doubted, but the mapping evidence and the Lidar work together to suggest it was a real feature, and it is moreover one whose channel can be discerned in the borehole data too.

the claims of the Grimsby men.<sup>307</sup> Certainly, the people of Cleethorpes seem to have been rather incensed by Grimsby's attempts to take control of this section of coastal grazing marsh, which was apparently also used by them for horse-racing.<sup>308</sup> In C. Ernest Watson's *A History of Clew and the Thorpes of Clew*, published in 1901, it is noted that the 'famous "Blue Stone"' was

a relic of the time when the Mayor and Corporation of Grimsby "whipped the boundaries." Tradition, however, could not control the rapacity of the Grimbarians, who claimed that their Marsh extended as far as the Old Haven [=the East Haven, above]. The Meggies [a local name for the inhabitants of Cleethorpes] pinned their faith upon the Blue Stone, and the Kirton Quarter Sessions of 1828 pronounced in their favour. The town was not going to be brow-beaten by the village, verdict or no verdict; Grimsby turned its cattle to graze between the Blue Stone and the Old Haven. Cleethorpes promptly impounded them. Grimsby sent out a hundred stalwarts armed with bludgeons to assault the pound and rescue the cattle. Cleethorpes charged them with pound-breach, and nine of the enemy went to prison. Grimsby thereupon adopted the Meggy plan of campaign and impounded all Cleethorpes cattle found on the North of the Old Haven. Cleethorpes again invoked the law, and at the Lincoln Assizes of 1830 the matter was finally settled in their favour.<sup>309</sup>



Figure 74: Extract from a plan of the town, harbour and lordship of Great Grimsby, surveyed by W. Smith c. 1820, engraved by G. Parker 1893, published in A. Bates, *A Gossip About Old Grimsby* (1893); the plan shows the area of marsh grazing disputed between Grimsby and Cleethorpes on the coast—the 'Blue Stone' (marked at centre) was eventually determined to be the ancient boundary marker. The plan also shows the 'Old East Haven' on the far right and Cleethorpes' Racing Ground (Source: British Library digitised copy, [Flickr](#); Public Domain).

With respect to Grimsby itself, this is, of course, one of the two premier towns and trading centres on the Lincolnshire coast, and both it and Boston had become important enough to attract the attention of the great Muslim scholar al-Idrīsī when he wrote about and mapped England in around 1154, being two of the only three coastal towns he deemed worthy of note north of the Thames.<sup>310</sup> In terms of the origins of the town, this is traditionally ascribed to the Viking era, given the town's Scandinavian name, its Anglo-Scandinavian links in the medieval tale of *Havelok the Dane*, its appearance in the Icelandic *Orkneyinga saga*, and a reference to a Norwegian merchant ship docked there in 1069.<sup>311</sup> Moreover, there are certainly indications that there was some sort of

<sup>307</sup> Bates, *Gossip About Old Grimsby*, pp. 11–12; the case was briefly reported as Bellamy vs. Woodliffe and Anderson in the *Hull Packet*, 23 March 1830, p. 3, and the *Stamford Mercury*, 12 March 1830, p. 2.

<sup>308</sup> See, for example, Bryant's *Map of Lincolnshire* (1828), which shows the race-course here.

<sup>309</sup> C. Ernest Watson, *A History of Clew and the Thorpes of Clew* (Grimsby, 1901), pp. 50–1.

<sup>310</sup> C. Green, 'Al-Idrīsī's twelfth-century description and map of Lincolnshire', *Lincoln Record Society News Review* 18 (2021), 2–4.

<sup>311</sup> For example, Cameron, *Place-Names of Lincolnshire* 5, p. 48; S. H. Rigby, *Medieval Grimsby: Growth and Decline* (Hull, 1993), pp. 3–7; E. Gillett, *A History of Grimsby* (Oxford, 1970), pp. 6–8.

significant pre-Viking activity in the local area, including a significant Anglo-Saxon road that seems to cross Lincolnshire heading for Grimsby and the arguably pre-Viking coastal lookout hill and fort just to its west at Toot Hill (Little Coates).<sup>312</sup> As to the medieval town itself, although Grimsby was a less important port than Boston in the Middle Ages, it still clearly had some strong overseas trading connections—with Scandinavia in particular—and it remained prosperous right through the fourteenth century, when it started to enter a period of decline partly caused by the silting of its harbour. It was also fiercely protective of its trade. When the new town of Ravenserodd was built upon a sand bank thrown up by the sea in the midst of the Humber in the mid-thirteenth century and rapidly began to grow, obtaining charters in the 1250s and 1290s, the men of Grimsby had no hesitation in declaring that it was a lawless island, whose men arrested ‘with a strong hand’ any merchant ships headed to Grimsby and ‘by fear and force have compelled and daily do compel them to turn aside to the aforesaid new town, and to sell their merchandize there’, leading to the growth of Ravenserodd and the partial desertion of the port of Grimsby. Unfortunately for Grimsby, their complaints to the king were ignored; more pleasingly for the town, the sea decided by itself to reclaim Ravenserodd from the 1330s onwards, so that by 1362 it was completely ruined, something that was ascribed to its evil character and the judgement of God himself. As one contemporary wrote,

chiefly by wrong-doing on the sea, by its wicked works and piracies, it provoked the wrath of God against its self beyond measure. Wherefore, within the few following years, the said town, by those inundations of the sea and the Humber, was destroyed to the foundations, so that nothing of value was left.<sup>313</sup>

The decline of Grimsby itself after the fourteenth century was, however, apparently fairly drastic too, with the burgesses claiming in around 1490 that ‘the haven is wrecked and stopped by which the resort of merchandise has gone down’.<sup>314</sup> Indeed, the continued decline of the town was such that, by 1790, more fish was being landed at inland Louth, via its canal, than was the case at Grimsby with its port.<sup>315</sup> This reduced status was only eventually combatted by attempts to restore the harbour from the start of the nineteenth century, culminating in the construction of new docks completed in 1852, 1879 and 1886, and a consequent renewed importance for the town that saw it become one of the fastest-growing urban centres in the country.<sup>316</sup> So, for the first half of the nineteenth century, Louth was the larger of the two towns, but after the new docks were built Grimsby’s population quickly surpassed that of the inland town. By the end of the nineteenth century the population of Great Grimsby parish was over 30,000 and that of the municipal borough over 50,000, and by the middle of the twentieth century, Great Grimsby could proudly boast that it was ‘By Far The Largest Town In Lincolnshire’, with a population of nearly 100,000.<sup>317</sup>

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<sup>312</sup> See C. Green, ‘Toote Hill and Cun Hu Hill: two lost pre-Viking sites near Grimsby’, blog post, 31 August 2014, <https://www.caitlingreen.org/2014/08/toote-hill-and-cun-hu-hill-grimsby.html>; B. Cox, ‘The pattern of Old English *burb* in early Lindsey’, *Anglo-Saxon England* 23 (1994), 35–56 at pp. 36 (map), 42–3; B. Cox, ‘Yarboroughs in Lindsey’, *Journal of the English Place-Name Society* 28 (1995–6), 50–60; K. U. Ulmschneider, ‘Settlement, economy, and the “productive” site: Middle Anglo-Saxon Lincolnshire A. D. 650–780’, *Medieval Archaeology* 44 (2000), 53–79 at pp. 64 (map), 65.

<sup>313</sup> See C. Green, ‘Ravenserodd and other lost settlements of the East Yorkshire coast’, blog post, 22 February 2016, <https://www.caitlingreen.org/2016/02/ravenserodd-lost-towns-yorkshire-coast.html>.

<sup>314</sup> Rigby, *Medieval Grimsby*, p. 133.

<sup>315</sup> D. N. Robinson, *The Book of Louth: The Story of a Market Town* (Buckingham, 1979), p. 137.

<sup>316</sup> See S. H. Rigby, *Boston and Grimsby in the Middle Ages* (University of London PhD Thesis, 1982); Rigby, *Medieval Grimsby*; Gillett, *History of Grimsby*; D. Kaye, *The Book of Grimsby: The Story of Borough, Town and Port* (Buckingham, 1981).

<sup>317</sup> Kaye, *Grimsby*, p. 59; White, *History, Gazetteer, and Directory of Lincolnshire* (1856), pp. 240, 574; *Kelly's Directory of Lincolnshire* (London, 1896), pp. 220, 382. Louth’s population reached just over 10,000 in 1851 and was still that in 1891.



Figure 75: An early twentieth-century postcard of Grimsby Docks, showing the dock tower of 1852 (Source: Newberry Library Postcards Collection, [Internet Archive](#), Licence-free).

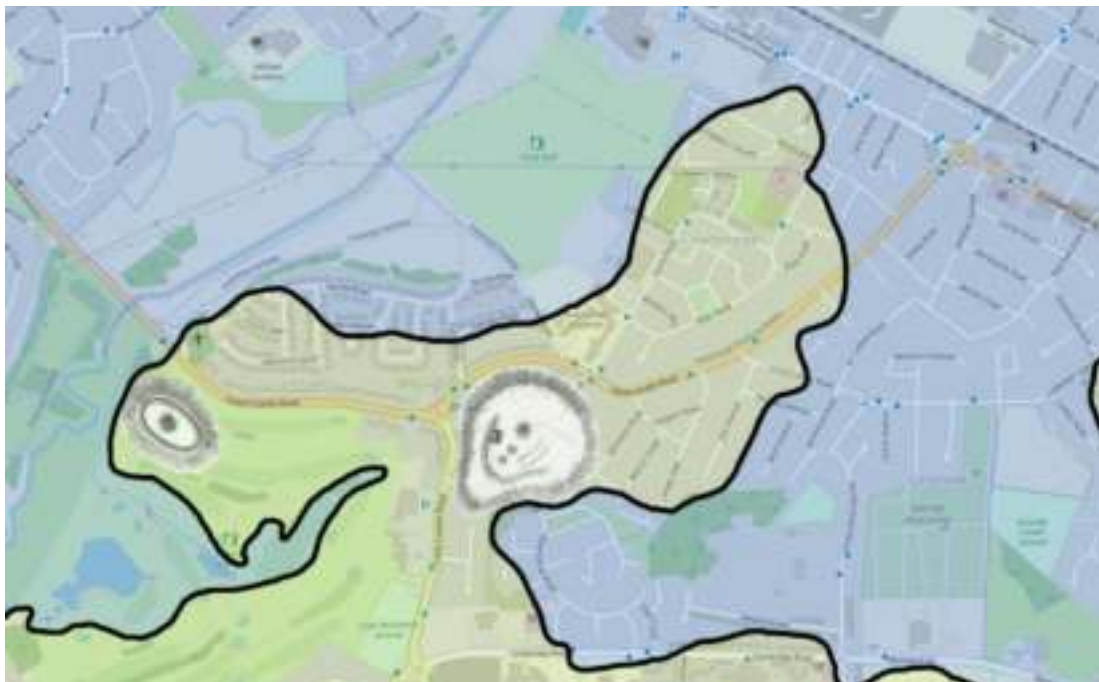


Figure 76: A map of the area around Toote Hill, Little Coates, Grimsby, showing the location of Toote Hill (right) and Cun Hu Hill (left) prior to modern quarrying and landscaping, based on the Rev. W. Smith's etching of these features in Oliver's *Monumental Antiquities of Great Grimsby* (Hull, 1825). These have been placed in their likely correct positions on a modern map, based on Cox's research. Note, Cox argues that Cun Hu Hill had straight ramparts, rather than curved as Smith's stylised plan shows them, although Smith's drawing is retained for illustration purposes here; the position of Cun Hu Hill is also very slightly adjusted from Smith's plan, as per Cox. The scale included on Smith's 1825 plan was used to adjust the features to their correct size on the modern map, with the proviso that this assumes that Smith was reasonably accurate in his drafting. In addition to the above, an indication of the landscape in this area has also been added, using the 5m contour as it would have been prior to quarrying, with dry land above this level in green and low-lying land in blue, in order to show this coastal marshland peninsula on the edge of the River Freshney (Base modern mapping © OpenStreetMap contributors, available under the Open Database Licence).



Figure 77: The destruction of Toot Hill. A photograph taken in 1903, showing the hill in the process of being quarried away (Source: Walter Johnson, *Byways in British Archaeology* (Cambridge, 1912), [Internet Archive](#)).

Aside from Grimsby itself, the other major feature of note on the Lidar of this map-view is the valley of the River Freshney, which Abraham de la Pryme at the end of the seventeenth century reports was once navigable by large coal vessels up to Aylesby.<sup>318</sup> This is barely visible on Lidar without adjusting the colour ramps, but was clearly important and had its own haven slightly up the Humber from the Grimsby Haven; indeed, the men of Grimsby tried to have the river diverted to help prevent silting in their haven in the thirteenth and fourteenth centuries, although these attempts were resisted until the seventeenth century.<sup>319</sup> On the east bank of this river, at Little Coates, we find two important landscape features, namely Toot Hill and Cun Hu Hill, which stood on a near-island/promontory jutting out into the marsh from the main clay uplands. Needless to say, Toot Hill is one of those coastal sites mentioned above that derive from Old English *tōt-hyll*, ‘a look-out hill’, and which probably functioned as an Anglo-Saxon era coastal defence/warning site. Certainly, it would seem to have been an impressive landscape feature, reaching up to 15–30m OD at its summit, with the latter apparently encircled by a trench of some sort.<sup>320</sup> Unfortunately, the hill was quarried away over the course of the nineteenth and twentieth centuries, so no excavations are now possible (fig. 77). The other feature on the promontory was the likewise now-destroyed Cun Hu Hill, on the site of the current golf course, which is rather more mysterious but seems to have been an earthen fortification with a ditch and rampart. Barrie Cox has considered this to be most probably a fortification constructed for coastal defence in the Late Roman period, comparing it to Yarborough Fort, and it was perhaps used thereafter through the early medieval period, forming a unit with Toot Hill just to its east.<sup>321</sup>

<sup>318</sup> De la Pryme, *Diary*, p. 153.

<sup>319</sup> Rigby, *Medieval Grimsby*, p. 30.

<sup>320</sup> Oliver, *Monumental Antiquities*, pp. 29, 31, 66–7; W. Johnson, *Byways in British Archaeology* (Cambridge, 1912), pp. 71–3. Oliver reports the original height as around 100ft, but the OS surveys—made, it should be noted, after it had already been partially quarried away—only put it at around half that height.

<sup>321</sup> See on both these sites Green, ‘Toote Hill and Cun Hu Hill’; Cox, ‘Yarboroughs in Lindsey’. Cox reports that elements of the earthworks can still be discerned beneath the golf course at Little Coates.



Figure 78: Reconstruction of the likely early landscape of around 2,000 years ago in this map-view, based primarily on the borehole and Lidar data, along with previous reconstructions, showing the now-eroded promontory of Cleethorpes and the suggested major creeks of the coastal marshes (Underlying mapping: OS Six Inch, National Library of Scotland).

Finally, a comment is needed on the prehistoric landscape of this area. Grimsby is blessed with an abundance of boreholes that, in concert with previous reconstructions of the underlying pre-inundation landscape here,<sup>322</sup> enable an attempt at mapping the marshland landscape prior to modern development in the absence of useful Lidar details of channels. The following map shows the landscape as it may well have stood around 2,000 years or so ago, when the marine inundations had reached something like their maximum inland extent.<sup>323</sup> It includes a number of interesting features, not least a suggestion of the lost extent of coastal cliff at Cleethorpes and Humberston since that time,<sup>324</sup> the wide expanse of coastal marshes, mudflats and sands that existed to the south of Humberston,<sup>325</sup> and the likely glacial ‘islands’ in the Grimsby marshes, including the Toote Hill/Cun Hu Hill promontory to the west. The borehole data suggests the existence of a number of large, persistent channels in this marshland, of the type found elsewhere in the marshlands, and these are mapped here.<sup>326</sup> One of these is a large, exceptionally deep valley cut into the glacial deposits that was encountered when the new docks were created in the mid-nineteenth century and which can be credibly considered to be the ancestor of the main Grimsby Haven and Freshney river.<sup>327</sup> Another is the Old East Haven, which not only appears as a

<sup>322</sup> Berridge and Pattison, *Grimsby and Patrington*, pp. 62–4 (especially figs 27 and 28).

<sup>323</sup> See further the conclusion below, which includes reconstructions of the early landscape of the entire Outmarsh.

<sup>324</sup> I have relied on a georeferenced version of Berridge and Pattison’s fig. 28 for this, in the absence of any other good source of evidence, but with this adjusted to take account of the Buck Beck valley that is clearly visible on the Lidar (which they don’t show, largely due to the larger scale of their map, one suspects, although they do show Pleistocene deposits at the surface in this valley area on their fig. 27, which boreholes—*e.g.* BGS boreholes 466397 and 466306—show not to be the case).

<sup>325</sup> Berridge and Pattison, *Grimsby and Patrington*, pp. 65–6 and figs 28 and 29, argue for a persistent ‘sand body’ extending southwards from the Humberston promontory to Grainshorpe, which provided some natural coastal protection and also underlies the saltern mounds of that district; this may have started to form sometime around 2000 BC or so.

<sup>326</sup> Extensive use of the British Geological Survey boreholes was made, in tracing these islands and channels, along with the prior reconstruction of Berridge and Pattison and historic accounts of glacial till finds in this area.

<sup>327</sup> C. Reid, *The Geology of Holderness and the Adjoining Parts of Yorkshire and Lincolnshire* (London, 1885), p. 91; E. H. Clark, ‘Description of the Great Grimsby (Royal) Docks’, *Proceedings of the Institute of Civil Engineers* 24 (1864–5), 38–

down-cut feature in the Lidar data, but is discernible in borehole records too.<sup>328</sup> Interestingly, just to the south of this feature, between the Old East Haven mouth and the Cleethorpes promontory (north and north-east of where Cleethorpes railway station is) is an extensive area of ‘sunken forest’ on the beach surface that was uncovered by the sea in the 1870s and can still be visited at low tide. In many ways, this is the most impressive outcrop of this feature—discussed previously in the section on Chapel Point to Mablethorpe—from the entire Lincolnshire coast. Belonging to a slightly more recent period than the submerged forest exposures already mentioned at Wolla Bank, being around 4,500 years old or so and thus Late Neolithic in date, there are a variety of large fallen tree trunks regularly visible here, along with stumps, roots, and a fragment of a possible timber trackway. Some of the trees may even have signs of subsequent human working, with flint blades and a hafted Bronze Age axe-hammer having also been found here in the past.<sup>329</sup>



Figure 79: A tree trunk from the Late Neolithic forest exposed on the sea-front at Cleethorpes with the Grimsby Dock Tower in the background.

61 at p. 41—this channel is apparent in the BGS boreholes and is mapped on the till-surface reconstruction of Berridge and Pattison, *Grimsby and Patrington*, fig. 27 (p. 63), who show it trending towards the Freshney valley, as it is shown here too, suggesting that the medieval desire to redirect the Freshney into the Grimsby Haven was simply a return to the course it had once taken in prehistory. The borehole data also shows a separate outfall in the position of the medieval–early modern Freshney river and haven which is cut slightly down into the till at a much higher (*i.e.* later) level, but the paucity of boreholes in the Freshney valley means neither this nor the main Grimsby Haven channel can be traced here—it is plausible that they originally formed two outfalls of the one watercourse (cf. the Lud) post-inundation, but as this cannot be demonstrated it is not shown on the included map.

<sup>328</sup> The part of its ‘valley’ cut into the underlying glacial deposits is shown in the till-surface reconstruction of Berridge and Pattison, *Grimsby and Patrington*, fig. 27 (p. 63), to the east of the down-cut traces of the main Grimsby Haven/Freshney river.

<sup>329</sup> See Leahy, ‘A dated stone axe-hammer from Cleethorpes’, for the axe-hammer find and the dating of the submerged forest itself (calibrated using IntCal20 and Calib 8.20); A. Sherman, ‘Community archaeology around the English coastline’, *Journal of the Council for British Archaeology Yorkshire*, 4 (2015), 25–8. See also A. Sherman, ‘Revealed: Cleethorpes’ Neolithic history’, blog post, *Friends of Cleethorpes Heritage*, 23 November 2015, <http://friendsofcleethorpesh heritage.co.uk/news/untitledpost> (accessed 1 March 2022), and CITiZAN records 84551 (Possibly worked prehistoric timber) and 81607 (Cleethorpes trackway)



## 6 The Wash coastline from Boston to Wainfleet

This map-view covers the largest area of any, due in part to its easily mappable shape in comparison with the long, curving coastline of the Lincolnshire Marsh. The landscape here shows notable differences to all the Lincolnshire Marsh map-views discussed above, not least the extreme complexity of the channels visible on Lidar here; the presence of a large area of the current land-surface that lies below 0m OD, and wide areas cutting off the low-lying Low Grounds from the current sea. In some ways, it is most akin to the northernmost Marsh around Marshchapel, but this comparison only partially holds. Key points relating to the evidence from this map-view include the following.

- The sheer number of palaeochannels visible in the Lidar data make tracing channel systems much harder in this area, with multiple layers of overlapping systems identifiable. Fortunately, these different channel systems often sit at slightly different heights, with the latest channels reaching over 3m above sea-level and the lowest being around sea-level itself or lower. As such, it was possible to begin to distinguish different systems from the Lidar alone.
- Aerial photography, along with ground observation, has been used in the Wrangle area of this map-view previously by the Fenland Survey to map the early channels and roddon systems.<sup>330</sup> Although occasional use was made of this material and the mapping of the Fenland Survey, the primary source was the Lidar however, not least because the channels are so clear on it and have been studied in depth before, and also because the Lidar seems able to solve some of the issues previous attempts at mapping identified.<sup>331</sup>
- The field pattern along the coast has been used to good effect to trace early havens here by Hallam and, more recently, Simmons, and is a valuable tool in trying to understand this landscape, especially for the areas around Friskney Haven, Wrangle Haven, Leake Haven and Toft Haven.<sup>332</sup> Early cartographic evidence is also of some use. The early OS maps and the maps of the Witham Fens collected by Wheeler<sup>333</sup> show considerable detail when it comes to sea-banks and other features. Antique maps from the sixteenth century and before are of somewhat less use, as they tend to show little of the coast, although the map of the Lincolnshire coast by Lucas Janszoon Waghenaeer from 1585 (reissued in English in *The Mariners Mirror*, 1588)<sup>334</sup> shows useful details, and some medieval maps show what looks like the proto-Gibraltar Point at Skegness and the importance of the Witham.<sup>335</sup>
- Geological data has been well-treated by numerous researchers in this area of the coastal zone, and whilst a separate survey was conducted of this for the current project, it largely acted to confirm and only slightly adjust previous work.<sup>336</sup> As before, this material is of use in terms of demonstrating the

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<sup>330</sup> T. W. Lane, *The Fenland Project Number 8: Lincolnshire Survey, the Northern Fen-Edge* (Sleaford 1992), p. 72.

<sup>331</sup> Malone, 'Lincolnshire Fenland Lidar'; Malone, *South Lincolnshire Fenland Lidar*; Lane, *Fenland Project 8*, pp. 71–4.

<sup>332</sup> Hallam, *Settlement and Society*, pp. 71–92; Simmons, *Fen and Sea* and his website *Margins of the East Fen: Historic Landscape Evolution* (<https://www.dur.ac.uk/east-lincs-history/>) and the resulting publications. These include 'Rural landscapes between the East Fen and the Tofts in south-east Lincolnshire 1100-1500', *Landscape History* 34 (2013), 81–90; 'Creating dry land in S.E. Lindsey (Lincolnshire, England) before AD 1550', *Water History* 6.3 (2014), 211–25; 'Development of the Tofts'; 'The emergence of the south Lindsey coast of the Wash before Domesday', *Midland History*, 42.2, 139–158; and 'Medieval and early modern management of the River Lymn and Wainfleet Haven (east Lincolnshire, England)', *Landscape History*, 39.2 (2018), 5–21.

<sup>333</sup> Wheeler, *Maps of the Witham Fens*.

<sup>334</sup> A. Ashley, *The Mariners Mirror* (1588), an English translation by Anthony Ashley of the Dutch *Spiegel der Zeevaerd*t by Lucas Janszoon Wagenaer.

<sup>335</sup> See C. Green, 'Some interesting early maps of Lincolnshire', blog post, 19 November 2015, <https://www.caitlingreen.org/2015/11/some-early-maps-of-lincolnshire.html>.

<sup>336</sup> D. Brew, 'Holocene lithostratigraphy and broad scale evolution of the Lincolnshire Outmarsh, eastern England', *East Midlands Geographer* 20.1 (1997), 20–32; D. S. Brew and G. Evans, 'The stratigraphy and origin of the Tofts ridge

antiquity of the various channel systems, with the addition that a significant number of radiocarbon dates from peat deposits in this area have allowed the course of marine transgressions (periods of flooding) and regressions (drier periods in which the coastline moved further seawards) to be traced in considerable detail here.

As is observed above, this area of the study zone is unusual in allowing multiple periods of overlapping channels to be traced. The broad character of the underlying roddon systems has been laid out in previous work,<sup>337</sup> but as a whole they do create an almost unmanageable network of creek systems across the region. As such, an attempt was made for the current project to separate out the different systems so they can be more easily analysed; in what follows, these creek systems are treated in turn, offering as they do a chronological overview of developments in this area of the coastline.



Figure 80: Reconstruction of the channel systems in place in the area around Boston and Wainfleet, based on Lidar data, aerial photographs and other sources as set out in the main text. Note, the roddons here form a complicated web, with channels of several different dates overlapping each other.

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in north-western Fenland, eastern England', *Proceedings of the Geologists' Association* 129 (2018), 135–43; M. P. Waller *et al*, *The Fenland Project Number 9: Flandrian Environmental Change in Fenland* (Cambridge, 1994; D. S. Brew *et al*, 'Holocene sedimentary evolution and palaeocoastlines of the Fenland embayment, eastern England', in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 253–73.

<sup>337</sup> See especially Malone, *Lincolnshire Fenland Lidar*; Malone, *Triton Knoll*; Rackham *et al*, *Triton Knoll*.

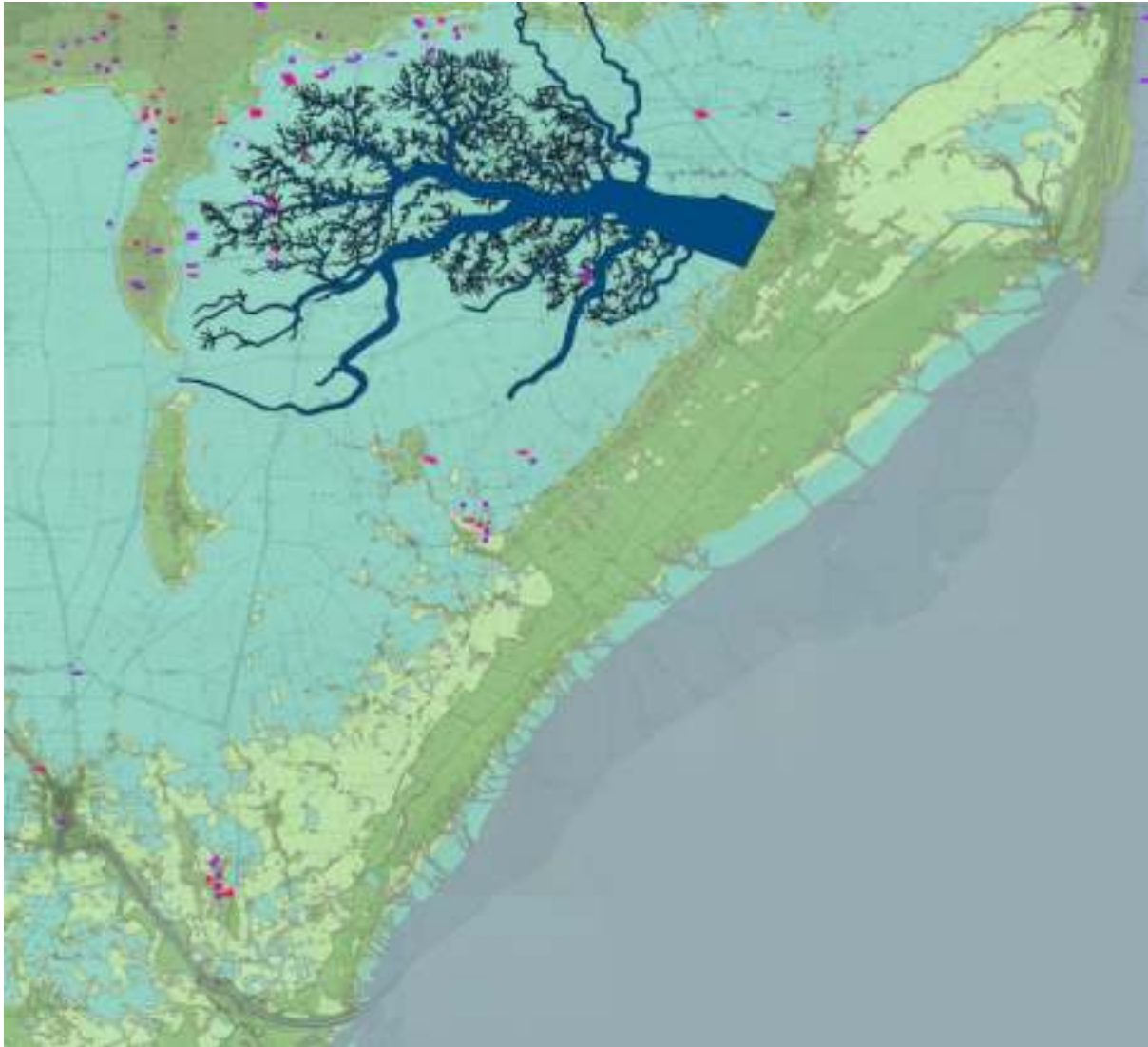


Figure 81: The large east–west roddon system underlying the East Fen, which probably dates from the Neolithic to Early Bronze Age, separated from the other channels visible in this map-view; also shown here are all recorded Neolithic (purple) and Bronze Age (pink) finds from the region—the symbols are as in fig. 64, with the addition of crosses (settlements) and stars (pottery).

The earliest identifiable creek system here is the large west–east flowing system visible as underlying the East Fen. This system is only really now visible because of the drainage of the East Fen at the start of the nineteenth century, which saw the rapid disappearance of its peat covering and a consequent lowering of the ground level here below sea-level, allowing these very early roddons to be traceable on the Lidar.<sup>338</sup> Work on the likely flooding of the Wash basin suggests that the initial marine transgression began around 7700 cal BP (c. 5740 BC) and continued rapidly until the entire area right across to Stickney and Toynton was flooded by about 4150 cal BP (c. 2200 BC), the East Fen basin probably flooding around the start of the Neolithic period, 4000 BC; by this point, most of the entire north–eastern Fenland would have been flooded, aside from a few isolated till ‘islands’, like that on which Fishtoft stood and those in the area of Wrangle.<sup>339</sup> After this timeframe, there was a period of marine regression that saw the coastline withdraw and peat accumulate from around c. 1850–1550 BC onwards, with this spreading onto the Low Grounds of Wrangle–Friskney between about 1550–1400 BC, although it was subsequently overlain by further marine flood deposits.<sup>340</sup> As such, the channels visible under

<sup>338</sup> Simmons, *Fen and Sea*, p. xxxv; Rackham *et al*, *Triton Knoll*, p. 16.

<sup>339</sup> Brew *et al*, ‘Holocene sea-level history’, pp. 72, 81–2, see also the reconstruction maps included in Brew *et al*, ‘Palaeocoastlines of the Fenland embayment’ and the earlier reconstructions in Waller *et al*, *Fenland Project 9*; Rackham *et al*, *Triton Knoll*, p. 18.

<sup>340</sup> Brew *et al*, ‘Holocene sea-level history’, p. 82.

the East Fen are likely to date from the Neolithic to Early Bronze Age, prior to the growth of peat in the East Fen (which seems to have largely remained under peat from this time through to the nineteenth century, with the thickness of the peat perhaps preventing further marine incursions),<sup>341</sup> and it is plotted here against all Neolithic and Bronze Age finds recorded from the map-view by the Lincolnshire HER, Portable Antiquities Scheme, and the Fenland Survey (fig. 81).

As can be seen, the saltmarsh creek system that had developed by the Early Bronze Age was extremely extensive and dendritic, with a main trunk roddon that reaches 1.5km wide at its mouth. Neolithic and Bronze Age finds are, needless to say, absent from its main course and instead cluster around the edges of the system or close by some of the minor tributaries, whilst a little Romano-British pottery is known from atop the main roddon in Wainfleet St Mary parish, offering confirmation if any were needed that it this system had either narrowed considerably or ceased to function by that point.<sup>342</sup> The southern elements of this roddon system are unfortunately very hard to trace, as they are overlain by the next creek system, but it seems clear that large channels connected to the east–west Bronze Age system did penetrate as far south as the gap between Sibsey and Stickney and some way into the Wrangle Low Grounds, although no tributary roddons can be seen here, despite considerable manipulation of the Lidar colour ramps. Further Bronze Age and Neolithic finds are mapped here to the south of this creek system, located in the Wrangle area and the Fishtoft area. The latter was definitely a glacial till island which stood above the flooding in these eras and, indeed, right through into the early medieval period, and so it is unsurprising—though perhaps interesting—to see significant evidence of activity here, well into the zone of marine inundation and the other side of the exceptionally large prehistoric Witham (see below). The Wrangle finds come from area where the glacial till was significantly closer to the surface than it was around the main roddon system, even reaching the surface in places, suggesting that drier ground was probably to be found here too, and that the existence of this was probably a factor leading to the west–east development of the trunk roddon system to the north.<sup>343</sup>

The second system visible here is a more southerly north–south draining system that in part overlies the early west–east system, suggesting a limited inundation of the East Fen that never reached the main basin due to the height of the accumulated peat, and which then connects in the south of the map-view with a huge roddon system flowing eastwards from inland.<sup>344</sup> This system can again be separated out from the other channels recorded here and the two primary components of it can be treated in turn. The north–south roddon system is clearly later than the Early Bronze Age, given that it partly overlies the creek system of this era, and it is has been considered to be a late prehistoric system that may have continued to function into the Romano-British era, given that the Iron Age and Romano-British salt production sites in the Wrangle area seem to be related to its tributary channels.<sup>345</sup> The start date of this system is less clear: it could be associated with the recorded marine transgression on the Low Grounds from 1400–850 BC, or with a second period of marine flooding from *c.* 400 BC onwards, or indeed both.<sup>346</sup> The latter is perhaps most likely, given the scale of the main roddons here, which are up to around 700m wide, and it seems credible that some version of these roddons could well have existed here from the initial marine transgression into the region onwards, although they cannot have initially reached

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<sup>341</sup> Rackham *et al*, *Triton Knoll*, p. 16.

<sup>342</sup> Lincolnshire HER MLI41738 (Sherds of Romano-British pottery including greyware and a sherd of grey-green colour-coated ware).

<sup>343</sup> See Lane, *Fenland Project 8*, p. 74.

<sup>344</sup> Malone, *Lincolnshire Fenland Lidar*, pp. 9, 12; Malone, *Triton Knoll*, p. 16; Rackham *et al*, *Triton Knoll*, pp. 7, 16.

<sup>345</sup> Malone, *Triton Knoll*, p. 16; Lane, *Coastal Salt-Making*, pp. 34–6, 49 (fig. 20). Note, the far north-easternmost of the north–south channels plotted in fig. 82 probably date from this phase, but there is some uncertainty here and elements could be from the suggested third phase of channels, below. However, those channels around the Iron Age and Romano-British salterns in Wrangle almost certainly belong to this phase, and these do seem to connect to the Friskney area channels.

<sup>346</sup> Brew *et al*, ‘Holocene sea-level history’, p. 83.



Figure 82: The north–south system of palaeochannels in the Boston region, showing the huge Witham roddon that these drain into, with Iron Age (orange) and Romano-British (yellow) salterns apparently associated with this system of creeks also shown.

quite so far north as they do now on Lidar, probably being at first constrained by a now-buried ridge of slightly higher, glacial-deposited ground that seems to run here between the East Fen and the Witham Valley.<sup>347</sup>

These huge north–south roddon networks drain southwards until they encounter the largest roddon in the study zone, namely the prehistoric course of the palaeo-estuarine River Witham, which widens from about 2km to 4km in width as it flowed in an easterly direction north of Boston to meet the Wash between Freiston and Leverton. This channel and its associated tributaries are likely to be exceptionally old. Boreholes indicate that this Witham roddon reaches up to 18m in depth and more, cutting down deeply into the glacial-era land-surface, indicating that it has flowed here since before the inundation of the Wash and was, moreover, subject to marine influence from the Mesolithic period onwards.<sup>348</sup> Needless to say, this must have been an enormously important landscape feature, and the presence of Neolithic–Bronze Age finds on the then-island of Fishtoft, which stood on its southern bank, suggests that it saw human activity and utilisation in the prehistoric era. As to when this

<sup>347</sup> See Brew *et al*, ‘Palaeocoastlines of the Fenland embayment’, p. 255 (fig. 4).

<sup>348</sup> Some of the boreholes looked at for this project show no base to the river channel in the study zone down to -15.5m OD or even lower *e.g.* BGS borehole 504218, at Boston Girls High School, reached down to 17.5m below the ground surface (*c.* -15.5m OD) without encountering any glacial till, only alluvium and marine deposits. Likewise BGS borehole 504211, at Frithville, reached down to 18.9m below ground level (at least -17m OD) without encountering anything other than ‘running sand’.



Figure 83: The late prehistoric creek systems, showing all non-saltern Iron Age (orange) and Romano-British (yellow) finds from the area recorded by the Historic Environment Record, the Portable Antiquities Scheme, and the Fenland Survey, with finds categorised as follows: crosses (settlements), open circles and polygons (cropmark sites), stars (pottery), circles (coins), open squares (metalwork), with the size of the icon indicating the rough quantity of such material for the last three categories. Note, some of the pottery and settlement sites are associated with saltern sites or located very close to them.

main channel silted up and was replaced by other, probably smaller, channels, this is difficult to say, but it seems clear that it had happened by the Romano-British era—which was, as we have already seen, a drier period that allowed colonisation of the coastal marshes. In particular, Romano-British sites recorded by the above sources are found not only on Fishtoft island, but also all across the Witham roddon top, which must have been a favoured site for settlement after the roddon silted up, being slightly higher than the surrounding marshes.<sup>349</sup> The same ‘drying out’ of the coastal marshes here is probably also responsible for the Romano-British settlement evidence found atop and amongst some of the north–south roddons too, though these must still have had active marine components to them in order to enable the extensive Iron Age to Romano-British salt-making industry in the Wrangle area to function. As to where the Romano-British-era River Witham flowed, this is less clear, but there are hints in the Lidar of a thinner—albeit still impressive—east to west channel flowing along the southern edge of the prehistoric roddon at a slightly higher elevation and still north located of Boston, which may be

<sup>349</sup> See the accompanying map; something similar is also evidenced further upstream to the west of this map-view, with Rackham *et al*, *Triton Knoll*, p. 10, noting late first millennium BC and Romano-British finds from the top of the roddon here.

relevant here (figs 83, 84), though the possibility that the river was partially or wholly redirected into a channel emptying further to the west has to be recognised.

The third set of roddons and creeks in this map-view are believed to be associated with the Late Roman/post-Roman inundation of the coast. Two radiocarbon dates from the top of a peat underlying the uppermost layer of marine silts at Swineshead—to the west of the current map-view—confirm that the Late/post-Roman inundation already discussed did indeed reach well inland of the current coast in this area, with the marine transgression there being dated to 395–535 AD/315–425 AD.<sup>350</sup> These roddons appear to have created the high Siltlands of the Holland district of Lincolnshire whose Anglo-Saxon occupation has been the subject of a recent volume, although this is primarily concerned with the areas to the south of our study zone.<sup>351</sup> Within the current project area, the roddons and flood-silts associated with this Late Roman and early medieval marine transgression stand noticeably higher than those of earlier periods, often at around 2.5m OD or so, and thus appear in light



Figure 84: The third suggested phase of palaeocreeks visible in this map-view, with labels indicating the names of these channels, as well as the great, unflooded area of the East Fen and a Lidar image of the Tofts ridge. The wide east–west channel running north of Boston may be the Roman-era course of the Witham or belong to the Late/post-Roman inundation.

<sup>350</sup> Waller *et al*, *Fenland Project 9*, pp. 79, 292–5 (calibrated dates). Note, the calibrated date reported by Waller may now need slight revision; recalibrating them with Calib 8.20 and the IntCal20 dataset gives 1 sigma dates of around 423–542 AD (361–601 AD at 2 sigma) and 340–437/498–532 AD (250–547 AD at 2 sigma).

<sup>351</sup> Crowson *et al*, *Anglo-Saxon Settlement on the Siltland*, with a useful map of the higher early medieval silts deposited by the Late/post-Roman inundation at p. 5; note, these form the basis of the maps I produced for my *Britons and Anglo-Saxons*.

green and occasionally dark green (3m OD or higher) in the standardised colour ramp. As before, it was felt worthwhile to try to separate these roddon channels from the complexity of the entire Lidar mapping of the Boston to Wainfleet area, something undertaken on the next map (fig. 84).

As can be seen from this, the extent of the Late/post-Roman flooding was noticeably less than that which occurred in the Early Bronze Age, with the East Fen largely left unaffected, presumably due to the depth of peat found here acting as a natural barrier to the floodwaters, as observed above.<sup>352</sup> Nonetheless, it was clearly a significant marine incursion that saw the floodwaters press right up the Steeping valley north of the East Fen to the area of Little Steeping–Toynton St Peter, as well as probably slightly onto the peat of the East Fen in the area of Wainfleet St Mary/Wainfleet All Saints. Further areas of apparent significant marine activity are found at Friskney, Wrangle and Leake, but the most impressive probable early medieval roddon channels are found in the region around Boston, Fishtoft and Freiston/Butterwick. In this latter area, the wide west–east roddon that can be seen running ‘under’ the others appears in the Lidar data to stand at a slightly lower elevation to those that overlie it; consequently, it is possible that this is the Roman-era course of the River Witham, after the main palaeo-estuarine roddon that lay immediately to the north had silted up (see above), although an alternative explanation might be that we have two generations of Late Roman/early medieval channels here. Whatever the case may be, the higher channels depicted here are certainly early medieval and arguably represent a potential Late/post-Roman course for the Witham (on the left, underlying Boston)<sup>353</sup> and a group of roddon channels associated with an early Toft Haven (on the right).<sup>354</sup>

On a more detailed map of the Toft Haven/Witham area, two things stand out in particular. First, the two major channel systems are clearly separated by the island of Fishtoft (confirmed by both British Geological Survey boreholes and reports on the Hobhole Drain of 1803 that cuts through it, but lacking from the BGS’s maps of the superficial geology of this area).<sup>355</sup> Second, there is an exceptional amount of evidence for Anglo-Saxon activity in this part of the coastal zone when compared to the Lincolnshire Marsh. So, Middle Saxon finds have been recovered from the edge of the roddons at Skirbeck and Fishtoft via metal-detecting,<sup>356</sup> and there are finds of Middle Saxon pottery and features from Fishtoft island, including, importantly, a probable Middle Saxon saltern site, based on finds of briquetage from eighth-/ninth-century deposits (which intriguingly suggest that this saltern followed in the Romano-British tradition of salt-making, rather than the subsequent medieval tradition).<sup>357</sup> Also of potential interest is the presence of a Toot Hill in Fishtoft parish, located on the other side of one of the roddons: this name involves Old English *tōt*, ‘look-out’, and places with such names have been thought to be associated with Anglo-Saxon-era civil defence, perhaps as beacon sites and as part of a response

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<sup>352</sup> Note, the extent of the Late/post-Roman roddons shown here accords well with the reconstruction of the last significant marine incursion/‘latest transgressive stage’, dated from mid-third century onwards, mapped by Brew *et al*, ‘Palaeocoastlines of the Fenland embayment’, p. 270 (fig. 27), although the current map obviously offers details of potential channels rather than just broad areas likely subject to marine incursion.

<sup>353</sup> Though this need not be its only outfall in that era; another branch may have travelled south from the area of Langrick Bridge to Swineshead or the Kirton area: Malone, *South Lincolnshire Fenland Lidar*, p. 6.

<sup>354</sup> For Toft Haven, see Hallam, *Settlement and Society*, pp. 80–5.

<sup>355</sup> British Geological Survey, *Geological Survey of England and Wales 1:63,360/1:50,000 geological map series, New Series, Sheet no. 128 (Boston)* (1995). The Fishtoft ‘island’ of slightly higher ground is visible in the Lidar data and geological evidence confirms its origins as a glacial till island: glacial till was, for example, found to be at the surface all along the line of the Hobhole Drain where it was cut near Fishtoft at the start of the nineteenth century (Waller *et al*, *Fenland Project 9*, pp. 333–4 and fig. 16.1) and it is also at the surface in BGS boreholes 16105083 and 16105089, although other boreholes from the north of the island show a layer of marine sediments covering the glacial till there (e.g. BGS borehole 16105086 has 45cm of marine sediments lying above the glacial till; note modern Fishtoft village is located at the northern end of the till island).

<sup>356</sup> For example, Portable Antiquities Scheme LIN-501970 (a ninth-century hooked tag from Freiston; note a quantity of Late Saxon material has also been found here by detectorists too); Lincolnshire HER MLI13097.

<sup>357</sup> Lane, *Coastal Salt-Making*, pp. 65, 83–4; Lincolnshire HER MLI84623, MLI89073, MLI97632 and MLI13362. The pottery finds include Middle Saxon Ipswich and Maxey wares, suggesting some sort of coastal trading activity here.





Figure 85: Detail of the area of Toft Haven at the start of the early medieval period, showing the distribution of Middle Saxon finds and sites (crosses are probable settlements, open squares metalwork, circles coins), along with an approximate extent of the Fishtoft glacial till island.

to the threat from Viking coastal raiders that began in the late eighth century (see further above).<sup>358</sup> All told then, the later importance of the Boston area seems to be somewhat prefigured in the available archaeological evidence, with some of the only significant finds of Middle Saxon material from the coastal marshes between Boston and Humberston being made here.

Boston itself is, of course, also of considerable interest and looks to have been founded at some point probably in the Late Saxon/Anglo-Scandinavian period (perhaps in the eleventh century?) on the higher, drier ground left behind by the silting of these roddons, with the

Witham channel through Boston perhaps in part representing a ‘final channel’ for the roddons that seem to be present on the Lidar (see fig. 86).<sup>359</sup> Perhaps the most famous of Lincolnshire’s seaports, by the twelfth century Boston was clearly a place of such importance that it came to the attention of the great Muslim scholar al-Idrīsī, working in Sicily in around 1154. Boston is one of only a handful of English coastal towns mentioned and mapped by al-Idrīsī north of the Thames (the others being Yarmouth and Grimsby), whilst the Witham running from Boston to Lincoln is the only river he maps between the Thames and Scotland, all of which is suggestive of the early importance of both.<sup>360</sup> Indeed, Boston has been described as a ‘medieval boom town’ which, by its location, was well-placed to take over from Lincoln—one of the most important Viking-era trading centres and ports in England<sup>361</sup>—as the major harbour for the region, as larger ships were introduced and inland ports fell out of favour.<sup>362</sup> With its ability to cater for such larger ships, good links with Germany and Scandinavia, and the growth of the wool trade, Boston found itself in a very favourable position, and by the thirteenth century it was the most important port in England for the shipment of wool, England’s premier export, exporting it from

<sup>358</sup> Lincolnshire HER MLI12757. See on place-names and Viking era defence, Baker and Brookes, ‘Signalling intent: beacons, lookouts and military communications’, and also Baker and Brookes, *Anglo-Saxon Civil Defence in the Viking Age*.

<sup>359</sup> On the early history of Boston, see S. H. Rigby, *Boston, 1086–1225: A Medieval Boom Town* (Lincoln, 2017).

<sup>360</sup> See C. Green, ‘Al-Idrīsī’s twelfth-century description and map of Lincolnshire’, *Lincoln Record Society News Review* 18 (2021), 2–4.

<sup>361</sup> See A. T. T. Harkel, *Lincoln in the Viking Age: A ‘Town’ in Context*, 2 vols (University of Sheffield PhD Thesis, 2010), and Jones *et al*, *City by the Pool*.

<sup>362</sup> Rigby, *Boston, 1086–1225*, pp. 30–1.

as far west as Cheshire and Flintshire. English wool was famed not only in Europe for its quality, but as far afield as Syria and Iran in the thirteenth and fourteenth centuries,<sup>363</sup> and Boston consequently attracted significant numbers of migrants from an early date. German and Flemish merchants involved in the wool trade were present here, as were Hanseatic merchants from the Baltic ports. In fact, in the fourteenth century, around 3% of Boston's population are thought to have been born outside of England, and in the fifteenth century Boston inhabitants included people born in the Netherlands, France, Scotland, Germany and Norway, some of whom are believed to have run inns in the town.<sup>364</sup> Of course, in subsequent centuries Boston's importance fluctuated and declined, with a major collapse in its trade towards the end of the medieval period. This led to contraction in the town, although from the eighteenth century there was a degree of recovery, especially after the construction of the Grand Sluice in 1764–6 (which allowed larger ships to enter the river), the straightening of the river to the Wash, and the construction of the docks in 1884.<sup>365</sup>

Looking further north along the coast to Old Leake and Wrangle, we find the next roddon channel system. The Lidar evidence here shows quite clearly a network of channels associated with the documented Leake and Wrangle Havens, spreading across the Low Grounds up to the peat of the East Fen (represented on the accompanying map by the Old Fen Bank that ran along its outer edge and protected the low grounds). Both sets of creeks seem to have been filled and ultimately probably choked by medieval saltern mounds of the type found in the Marshchapel area, with these also forming the wide, domed plateau of the Tofts the extends for 12km from Wrangle to Wainfleet. The



Figure 86: 'Plan of Boston, England' in the 1830s, Thomas Moule, 1837, slightly cropped (Source: The Norman B. Leventhal Map & Education Center at the Boston Public Library; licensed for reuse under an Attribution 2.0 Generic [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/) licence via [Flickr](https://www.flickr.com/photos/bostonpubliclibrary/)).

<sup>363</sup> See Green, 'Al-Idrīsī's twelfth-century description and map of Lincolnshire'; I'm not aware that the import of the non-European sources referred to here for the reach of the English wool-trade has previously been recognised.

<sup>364</sup> See further Rigby, *Boston, 1086–1225*; Rigby, *Boston and Grimsby in the Middle Ages*; W. M. Ormrod *et al*, *Immigrant England, 1300 – 1550* (Manchester, 2019), pp. 22, 50–1, 108, 112, 131–2, 142, 144, 176; J. Mackman, 'Lincolnshire', *England's Immigrants 1330 – 1550: Resident Aliens in the Late Middle Ages*, online resource, <https://www.englishimmigrants.com/page/sources/alien-subsidies/the-east-midlands/lincolnshire>, accessed 2021, 2022.

<sup>365</sup> For the decline of Boston, see for example S. Rigby, 'Medieval Boston: economy, society and administration', in S. Badham and P. Cockerham (eds), *The beste and fayrest of al Lincolnshire': The Church of St Botolph's, Boston, Lincolnshire, and its Medieval Monuments* (Oxford, 2012), pp. 6–28.

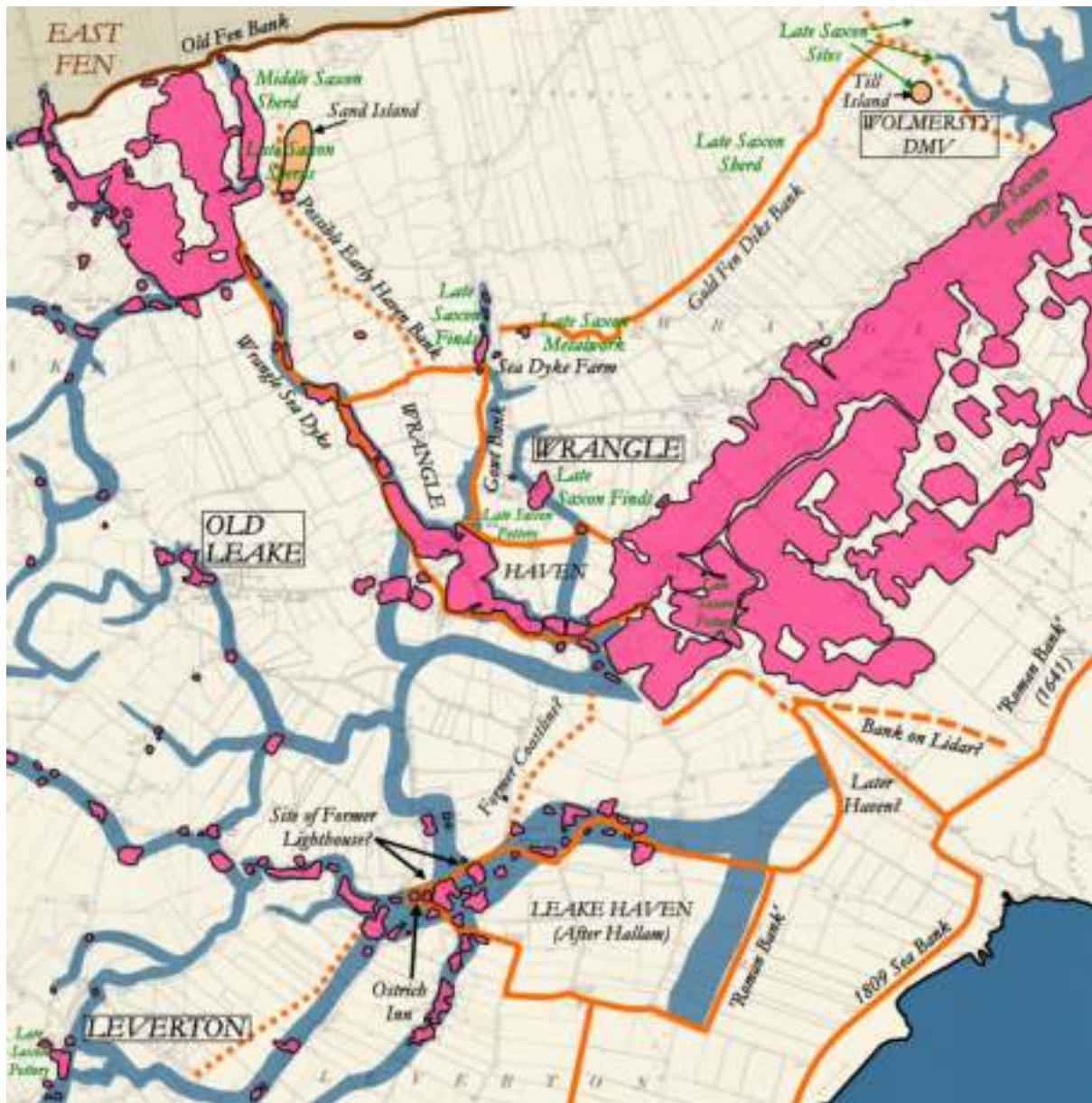


Figure 87: Map of the area around Leake Haven and Wrangle Haven, showing the medieval saltern mounds (in pink) that are found both in the Tofts ridge and also inland along the former creeks; banks (in orange), which seem to outline havens or inlets here; and the location of Middle and Late Saxon finds made in this area (Underlying mapping: OS Six Inch, National Library of Scotland).

latter feature reaches up to 5–7m OD at its highest and eventually provided a substantial barrier between the sea and the Low Grounds, its western edge presumably representing the sea-coast at the time the first line of salterns was constructed here and its eastern edge the coast when the last mounds were made via the piling up of the waste by-products of the medieval salt-making industry (moulde, aka silt and sand). As in the Tetney–Grainthorpe area, the saltern mounds of this zone testify to a considerable Late Saxon to medieval salt-making industry that brought about permanent changes in the landscape before its end in the seventeenth century, and both the Tofts and the industry that created them have been the subject of recent detailed local studies by Ian Simmons.<sup>366</sup> This salt-making industry and its attendant waste mounds seem to have its origins in the Late Saxon/Anglo-Scandinavian period here, based on finds of Late Saxon pottery from their surfaces and close-by

<sup>366</sup> See further, for example, Simmons, *Fen and Sea*, *passim*; I. Simmons, 'The landscape development of the Tofts of south-east Lincolnshire 1100–1650', *Landscape History* 36 (2015) 9–24; I. G. Simmons, 'Fen and sea: medieval and early modern landscape evolution in south-east Lincolnshire before 1700', *Landscapes* 18.1 (2017), 37–54.

them in various spots, as well as references to 41 salterns at Leake in Domesday Book,<sup>367</sup> although a single find of Middle Saxon pottery by some of the most inland of the saltern mounds might just hint at an origin in that era, something perhaps supported by the recent discovery of a Middle Saxon sand-washing salt production site at Kings Lynn.<sup>368</sup> In addition to the creek systems visible on the Lidar, a large number of banks can be identified in this area, many of which are believed to relate to Wrangle and Leake Havens—as can be seen, when these are mapped they do seem to run perpendicular to the coastline and outline convincing ‘inlets’ in a manner reminiscent of Dudic Bank and Schalflet (above), suggesting that the main roddons were only part of a wider coastal landscape in the early medieval period here.<sup>369</sup>

As to when these creek systems and attendant havens ceased to function, this is open to debate. Hallam argued that the area he identified as Leake Haven had been reclaimed in or by the twelfth century, although this may not be the entire story looking at the location of the roddons that ran through and beyond Hallam’s inlet, and an 1814 memory of a light-house having stood on the edge of Hallam’s Leake Haven may similarly suggest a slightly later period of marine-influenced channels here.<sup>370</sup> In this context, attention can perhaps be brought to two things. First, the seventeenth-century ‘Roman Bank’ seems to outline a thin ‘haven’ just to the north-east of Leake Haven, with an additional former bank just visible on Lidar appearing to indicate that this was once about twice as big as the current bank allows. Second, the map of the Lincolnshire coast published by Lucas Janszoon Waghenauer in 1585 (reissued in English in *The Mariners Mirror*, 1588),<sup>371</sup> seems to show a noticeable indent in the coast next to Leake, which would accord well with the above ‘haven’. If these two are indeed one and the same feature and a haven, then they perhaps reflect the final, sixteenth-century iteration of Leake Haven here. Turning to Wrangle Haven, Hallam doesn’t offer an end-date for this feature, but its course is very clearly partially choked by the saltern mounds not only in its creek, but also at the southern end of the Tofts. Assuming the first line of the Tofts were indeed built along the Late Saxon coastline, then this would suggest that Wrangle Haven as identified here was certainly much narrowed by the eleventh century; however, it had probably not been entirely blocked. References to a creek and a haven here continue into the thirteenth century, when a saltern abutting onto it is mentioned, and it seems to have still been open and active in the fourteenth century, when vessels from Wrangle took Lincolnshire salt to Yarmouth to help cure herrings at the herring fair and three vessels from Wrangle were recorded in an impressed royal fleet of 1337–9 (more than Wainfleet or Northcotes Havens contributed).<sup>372</sup> Indeed, early nineteenth century sources once again seem to imply that the Haven was open for some distance inland within not-too-distant memory,<sup>373</sup> and in this context it might well be wondered if the potential sixteenth-century ‘haven’ outlined by banks above, was not also the last stage of Wrangle Haven too—the traceable roddons of the two early medieval havens certainly look like they converged on this spot and the feature itself sits astride the Leake–Wrangle parish boundary.

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<sup>367</sup> Foster and Longley, *Lincolnshire Domesday*, p. 68.

<sup>368</sup> The Late Saxon and Middle Saxon pottery is recorded by Lane, *Fenland Project 8*, pp. 75–9 and microfiche. My thanks to Tom Lane for bringing this recent discovery to my attention; see his forthcoming ‘The King’s Lynn Salterns: a view from Lincolnshire’

<sup>369</sup> Hallam, *Settlement and Society*, p. 73, maps some of the sea-banks and havens; others are apparent from names on the OS Six Inch mapping and have been investigated by Simmons in the works cited above and on his online website, *Margins of the East Fen: Historic Landscape Evolution* (<https://www.dur.ac.uk/east-lincs-history/>).

<sup>370</sup> Hallam, *Settlement and Society*, pp. 72–5.

<sup>371</sup> A. Ashley, *The Mariners Mirror* (1588), an English translation by Anthony Ashley of the Dutch *Spiegel der Zeevaerd*t by Lucas Janszoon Wagenaer.

<sup>372</sup> Simmons, ‘Landscape development of the Tofts’, pp. 19–20; Pawley, *Lincolnshire Coastal Villages*, pp. 89–90, 101, 104–05, 107, 108, 115–16, 124, 147, 187, 189–90. Wrangle Haven still appears to be open in 1471, when 13 sacks of wool were carried by vessels from Wrangle (Pawley, p. 124).

<sup>373</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 89–90, who suggests that this haven may have been referenced by Leland in the sixteenth century; Simmons, *Fen and Sea*, p. 94, suggests that the nineteenth-century references to the haven may reflect memories going back to the seventeenth century.

Following the line of the Tofts north-east of Wrangle brings us to Friskney. Here we find another set of creeks, and the similarities with the situation in Wrangle are notable. The main creek itself, visible on Lidar, runs through an area that looks to be surrounded by banks and has been identified as ‘Friskney Haven’ by Simmons.<sup>374</sup> Furthermore, the early medieval creek once again looks to be choked with medieval saltern mounds and the wide, high block of the Tofts (saltern mounds) is similarly likely to be of Late Saxon date on its western side, representing the Late Saxon coastline, given finds of pottery of that era atop it.<sup>375</sup> Unlike in Wrangle and Leake, however, the Tofts cut the whole area of the parish off from the sea without any apparent break, with the result that a channel (the Friskney Eaudyke) had at some point to be dug to allow fresh water from the East Fen to escape.<sup>376</sup> This suggests an early end for this haven and creek system as an active waterway, and in this context it can be observed that there seems to be no convincing evidence for a functioning haven or creek system here in the medieval period or after, with finds of Anglo-Scandinavian metalwork from the midst of the proposed haven area suggesting that it had ceased to function by the eleventh century.<sup>377</sup>

Finally, we reach Wainfleet, which stands at the northern end of the Tofts. Both the original settlements bearing the name of Wainfleet and the site of the original haven lie around 3km to the west of the present town, which appears to have only been founded in the mid-twelfth century as a ‘new town’.<sup>378</sup> The original pre-Viking coastline can probably be seen in the area of slightly higher silts on the landward side of the Tofts and the Schalflet and surrounding the visible roddon of Wainfleet Haven as it stretched inland, although by the Late Saxon period the coastline is likely to have been located, once again, on the western edge of the Toft line. Situated as it was on a significant tidal inlet, there was clearly considerable salt-making activity in the Wainfleet area, and the medieval town appears to have actually been founded on the higher ground created by the Tofts, just at the



Figure 88: Map of the Friskney Haven area, showing the raised peats of the East Fen (brown), banks (in orange), medieval saltern mounds (pink), Late Saxon sites and finds (crosses are settlements, open squares metalwork, stars pottery), and creeks, set against the transcribed Lidar data (Underlying mapping: OS Six Inch, National Library of Scotland).

<sup>374</sup> For example, Simmons, *Fen and Sea*, p. 15 (fig. 2.2).

<sup>375</sup> Recorded by Lane, *Fenland Project 8*, and Harkel, *Lincoln in the Viking Age*, vol. 2, p. 423.

<sup>376</sup> Simmons, *Fen and Sea*, p. 45.

<sup>377</sup> Portable Antiquities Scheme LEIC-F1C6D4 (an Anglo-Scandinavian stirrup terminal, 1000–1100) and LEIC-F1B542 (an Anglo-Scandinavian harness link).

<sup>378</sup> Simmons, ‘Landscape evolution in south-east Lincolnshire before 1700’, at p. 39; Simmons, ‘The landscape development of the Tofts’, p. 10 and fig. 1; Simmons, *Fen and Sea*, p. 77.

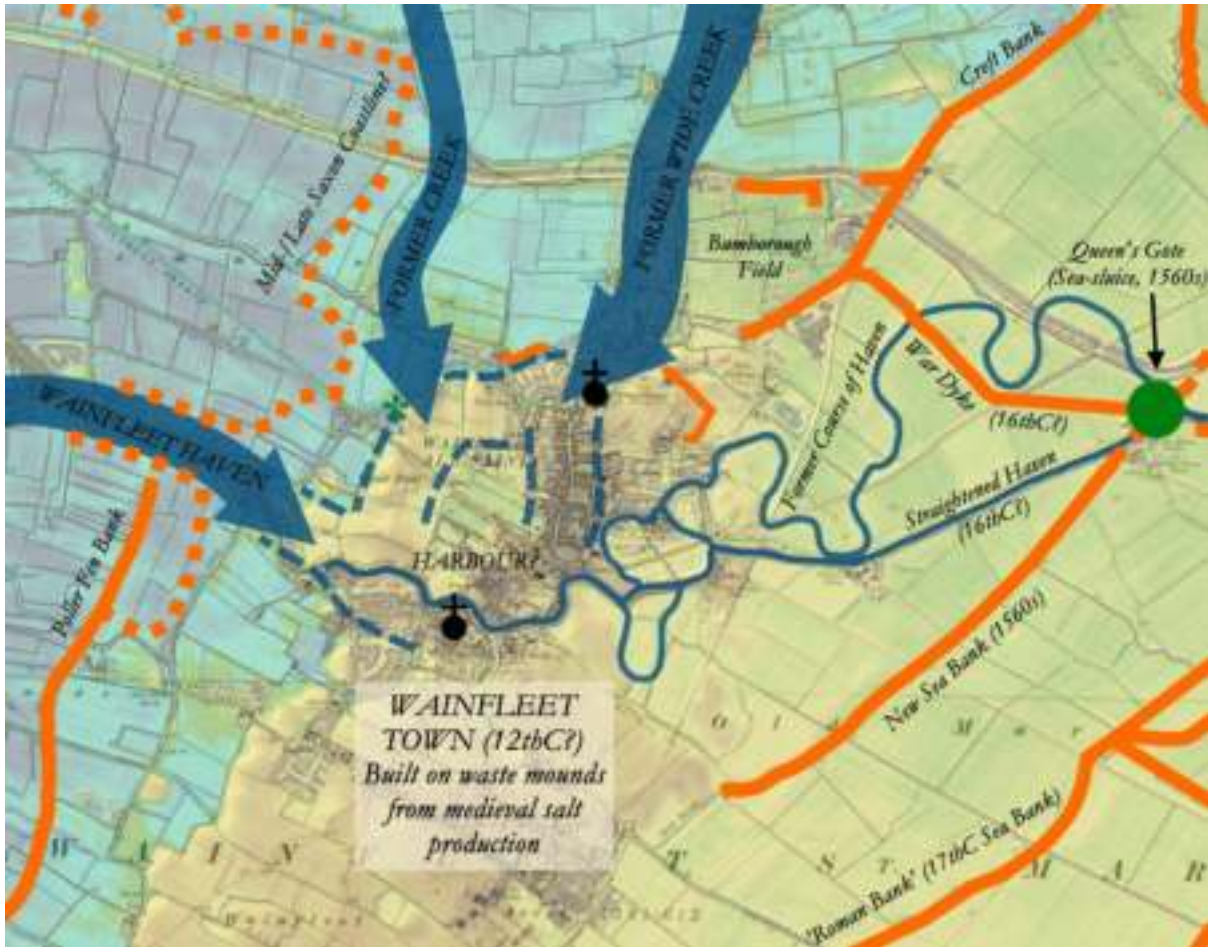


Figure 89: Lidar image of the Wainfleet area annotated with the major features; the easternmost of the northern creeks is the Schalflet's southern mouth and the green star Late Saxon pottery (Underlying mapping: OS Six Inch, National Library of Scotland).



Figure 90: Map of the wider Wainfleet area, showing the likely early pre-Viking coastline (dotted orange line), creeks and banks of the area—note, the western edge of the Tofts probably represents the Late Saxon coastline and the eastern edge the late/post-medieval coastline here, with dated banks suggesting reclamation first began around the Haven in the sixteenth century: Queen's Gate sea-sluice of the 1560s represents the limits of the high tide in that period, with a 'New Bank' leading from the tofts to this site (Underlying mapping: OS Six Inch, National Library of Scotland).

point where an impressively wide early medieval marine creek (the Schalflet) once flowed south from the Burgh le Marsh area to join Wainfleet Haven. Like Boston, Wainfleet was extremely prosperous in the medieval period, ranking amongst the most important towns of Lincolnshire in the fourteenth century, exporting both salt and wool, and engaging with Hanseatic, Norwegian and Dutch merchants, as well as buying herrings from the Scandinavian and Baltic fishing grounds. Its prosperity declined significantly after this, however, and by 1560 it was described as a ‘poor beggardly market town’ with no merchants.<sup>379</sup> The primary cause of its changing fate seems to be the silting up of the main channel, which abetted the more general issues around the decline in both local wool exports and the salt industry that affected many of the havens in this area. This seems to have been compounded by the early sixteenth-century growth of Gibraltar Point (see above) and the subsequent coastal reclamations of the growing saltmarshes along the coast here, which caused Wainfleet to be located increasingly far inland from the sea (the Haven mouth is now around 7km from the town).

Looking at this last question, the process by which these reclamations took place and altered the landscape can be most easily seen on maps of both the Wainfleet area and the wider zone inland of Skegness–Gibraltar Point. The earliest of these changes have been discussed at length by Simmons and the whole scheme mapped by Robinson,<sup>380</sup> but it is clear that the progress of these reclamations can be traced in the landscape via a large number of banks and sea-slucices on and around Wainfleet Haven. The earliest, mid-sixteenth-century reclamations took place around Wainfleet itself and Skegness, with the former requiring a new sea-slucice to be built for the Haven’s waters at Queen’s Gote. After this, progress continued rapidly, with the navigable Haven moving increasingly far away from the town of Wainfleet, new sea-slucices being built, and the old twisting course of the Haven straightened. The reclamations of the seventeenth



Figure 91: Map showing the likely stages of reclamations seawards of Croft Bank from the later sixteenth century onwards, set against the Lidar data: the successive sea-slucices, where fresh water met the saltwater of the haven, are in green, whilst the original course of Wainfleet Haven is shown prior to its straightening. The down-cut creeks cut off by reclamations and left behind are blue outlined in black, whilst higher roddons which seem to connect with those earlier roddons inland are shown without an outline (Underlying mapping: OS 1:25,000 1945–71, sheets 53/55, 1948, and 53/56, 1949, reproduced with the permission of the [National Library of Scotland, CC BY 4.0](#)).

<sup>379</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 19, 26, 110, 115, 124, 128, 130–3, 136–7, 148–52, 187; Simmons, *Fen and Sea*, p. 77.

<sup>380</sup> Robinson, *Lincolnshire Seaside*, pp. 27–31 and map on p. 35; Simmons, *Fen and Sea*, pp. 138–47.

century onwards took in very large areas, and both the Lidar and early nineteenth-century mapping<sup>381</sup> show considerable numbers of down-cut creeks left after the banks were built. Indeed, some of these look very much like they once connected with some of the medieval roddon systems visible in the southern Outmarsh and perhaps preserve the lines of these, as they once meandered over the sand and mudflats that were here in the medieval period and before.<sup>382</sup> In some ways, this whole landscape looks very like the reclamations made seawards of the medieval saltern mounds in the Marshchapel area, but the Wainfleet area reclamations were arguably even more dramatic. In total, since the mid-sixteenth century, around 35km<sup>2</sup> have been added to the parishes of Wainfleet, Croft and Skegness in this area, an astonishing amount,<sup>383</sup> with the reclaimed marshes being around 4.5 to 5km wide at their broadest.

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<sup>381</sup> James Bradley's *Plan of the Low Lands* from 1818, in Wheeler, *Witham Maps*, no. 120.

<sup>382</sup> See Brew *et al*, 'Holocene sea-level history', p. 75, for borehole evidence of a persistent sand body along the coast here and down to Gibraltar Point, which was probably deposited in intertidal and subtidal nearshore areas adjacent to The Wash and had its origins early in the prehistoric period. The covering of this sand body with saltmarsh is arguably a relatively recent feature, perhaps partly resulting from the repeated reclamations that pushed the sea ever further out.

<sup>383</sup> In contrast, the reclamations around Marshchapel since the seventeenth century (when they began) seem to have enclosed only around half of this amount of land.



## Conclusion—a chronological summary of the landscape evolution of the Lincolnshire coastline

The preceding sections have tried to offer a detailed overview of the landscape history of the Lincolnshire coastline from Boston to Grimsby, looking at each part of it in turn, based in the first place on the Lidar data and the new reconstructed maps of the coastal zone produced from this, and working from there to examine what the current landscape can tell us via an interdisciplinary approach. As should be clear, this is an enormously varied and dynamic landscape that has seen tremendous changes, with different areas of the coastal zone clearly having very different trajectories. Nonetheless, the broad tale has striking similarities as well as differences. In particular, the land-surface underlying the entire coastline was deposited at the end of the Late Devensian glaciation (c. 29,000–14,700 years ago), following initial deglaciation from around 18,400 years ago,<sup>384</sup> and then saw increasing inundation from around 8,000 years ago onwards, as the glaciers continued to melt and sea-levels rose. This had the effect of gradually transforming eastern Lincolnshire from an upland, hummocky, forest-covered zone sitting above the great lowland plain of Doggerland (now the bottom of the North Sea)<sup>385</sup> into first a gradually flooding landscape of shallow valleys and hills, and then a wide, flat landscape of low islands, creeks and coastal marshes that largely lay below the level of the highest tides. Although the flooding of the Fenland portions of the study zone have been studied at length in the past,<sup>386</sup> the evolution of the Lincolnshire Marsh from Wainfleet to Humberston has been less thoroughly investigated.<sup>387</sup> As such, it has been felt reasonable to attempt to produce new maps showing the potential progress of the flooding here from around 6500 BC to about 1000 BC, when the flooding reached something close to its maximum extent in this area, based on the complete survey of all boreholes undertaken for the project and the prior research and mapping that has been conducted in this area; these are included here as fig. 92.<sup>388</sup>

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<sup>384</sup> D. J. A. Evans *et al*, 'A chronology for North Sea Lobe advance and recession on the Lincolnshire and Norfolk coasts during MIS 2 and 6', *Proceedings of the Geologists' Association* 30 (2018), 523–40, which provides the most convincing interpretation and timeline of the Devensian glaciation for Lincolnshire published thus far.

<sup>385</sup> On Doggerland, see for example B. J. Coles, 'Doggerland: a speculative survey', *Proceedings of the Prehistoric Society*, 64 (1998), 45–81; I. Shennan *et al*, 'Modelling western North Sea palaeogeographies and tidal changes during the Holocene', in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 299–319; and V. Gaffney *et al*, *Europe's Lost World, the Rediscovery of Doggerland* (London, 2009).

<sup>386</sup> See, for example, I. Shennan, 'Flandrian sea-level changes in the Fenland. I: The geographical setting and evidence of relative sea-level changes', *Journal of Quaternary Science* 1.2 (1986), 119–54; I. Shennan, 'Flandrian sea-level changes in the Fenland. II: Tendencies of sea-level movement, altitudinal changes, and local and regional factors', *Journal of Quaternary Science* 1.2 (1986), 155–79; Waller, *Fenland Project 9*; Brew *et al*, 'Holocene sea-level history'; Brew *et al*, 'Palaeocoastlines of the Fenland embayment'; Brew and Evans, 'Stratigraphy and origin of the Tofts ridge'; and Rackham *et al*, *Triton Knoll*.

<sup>387</sup> Though see Brew, 'Lincolnshire Outmarsh'; P. Davies and R. Van der Noort, 'Prehistoric landscape development of the Lincolnshire coastal area', *East Midlands Geographer* 18 (1995), 3–11; Rackham *et al*, *Triton Knoll*. See also Berridge and Pattison, *Grimsby and Patrington*, pp. 63–5, for a detailed survey of the most northerly tip of the Outmarsh.

<sup>388</sup> Note, the key sources here include the valuable survey of coastal boreholes undertaken in Brew, 'Lincolnshire Outmarsh', as well as the mapping of the northern part of the marsh by Berridge and Pattison, *Grimsby and Patrington*. The resulting data was used to produce an approximate contour map of the whole area with 2.5m contours, though some areas are better served by boreholes, and so have higher confidence levels, than others. For those areas offshore, I have relied on the models produced by Ian Shennan, 'Modelling western North Sea palaeogeographies', albeit supplemented by the offshore boreholes recorded by Brew, 'Lincolnshire Outmarsh', and the BGS, as well as published mapping of the sea-floor and the overfalls areas; needless to say, I am grateful to Professor Shennan for sharing some of his underlying work preparatory to the maps he published with me, which helped considerably. Note, the depiction of the offshore islands (former hills) is partly based on Shennan *et al*, partly on Robinson, *Lincolnshire Seaside*, p. 17, and partly on A. H. W. Robinson's work on these areas as they currently

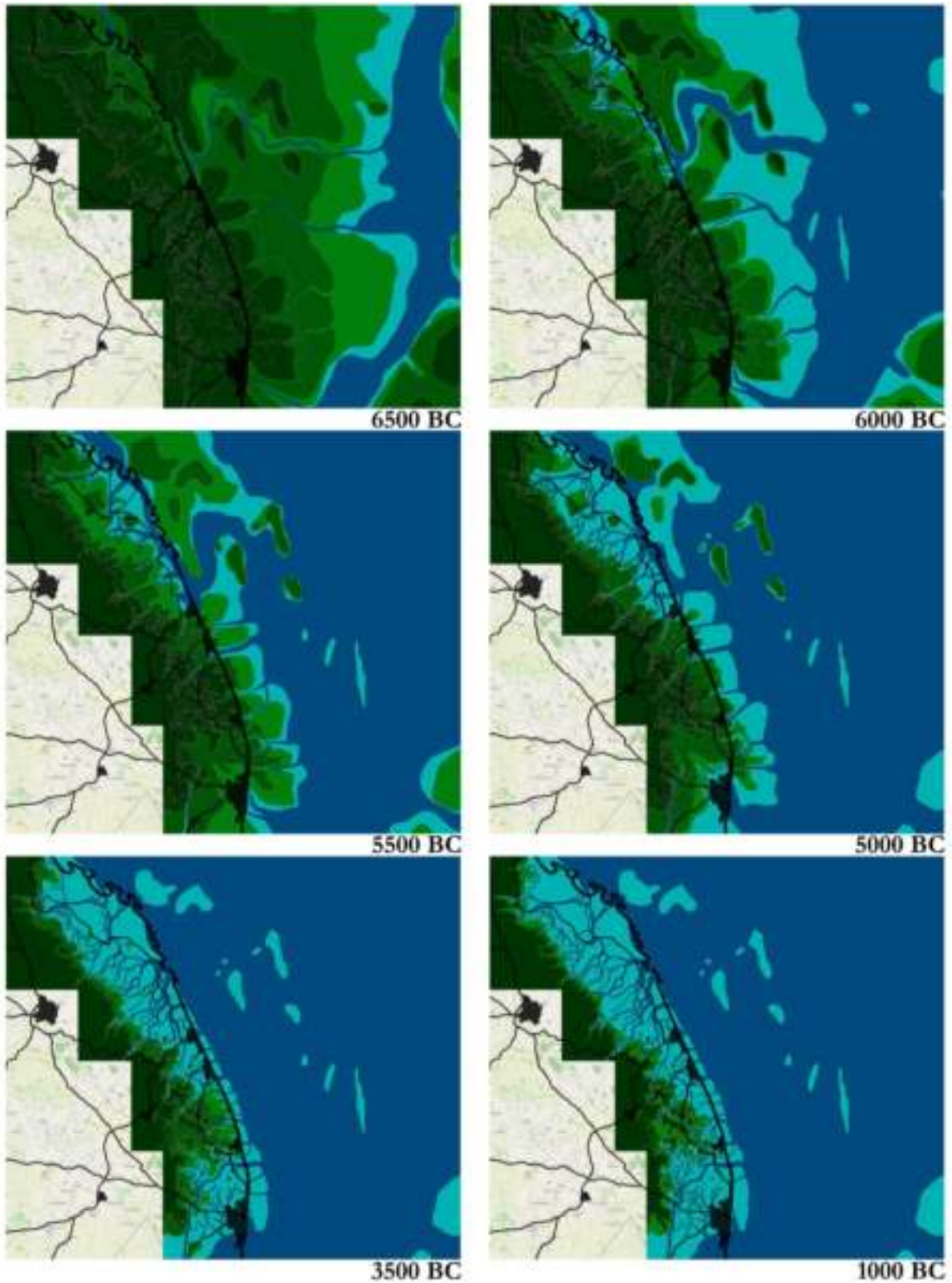


Figure 92: The flooding of the Lincolnshire Marsh with the modern coastline and towns marked: dark blue areas are suggested to be under water most of the time; light blue areas are probably below spring-tide level; light green indicates land around 2.5–5m above sea-level (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

exist ('The submerged glacial landscape off the Lincolnshire coast', *Transactions of the Institute of British Geographers* 44 (1968), 119–32). For discussion of these islands, see the references cited above in the treatment of the North Somercotes storm beach.

Some of the largest saltmarsh channels and estuarine rivers visible via Lidar on the land-surface of the project area clearly have their origins in the initial marine inundation of the region or even before this, as has been suggested above for the Witham roddon, parts at least of the Schalflet, and Northcotes Haven, amongst others. Along the Lincolnshire Marsh coastline, there is little evidence of multiple generations of roddons draining in different directions, as is found in the East Fen area. Whether this is a result simply of this coastline continuing to repeatedly fully flood right up to the Middle Marsh in the pre-Viking era, so covering up earlier generations of channels, unlike in the East Fen (where the last floods in the main basin seem largely to belong to the Early Bronze Age), or if it instead reflects a genuinely stable series of creeks and drainage is a difficult question. However, where there is geological evidence that pertains to this, it generally suggests that the channel systems that are visible and reconstructable on the Lincolnshire Marsh are likely to be of considerable antiquity and have their origins in the prehistoric era, the only major exceptions perhaps being in the areas of Theddlethorpe and Skegness, where the underlying geology suggests that the initial inundation and drainage may have taken a slightly different route to that seen in the visible channel systems, although this is not wholly clear.

With regard to human activity in the Outmarsh and Low Grounds, the evidence we have tends to understandably favour the unflooded or barely-flooded ‘islands’ of glacial deposits (the former hilltops and hillocks of the pre-flood landscape) like Fishtoft and the Wrangle area in the Boston–Wainfleet region, the Cumberworth island-group in the central Outmarsh, the Tetney glacial ‘island’ by Newton Marsh Lane that saw Bronze Age salt-making, and the bordering dry-land areas of the Middle Marsh and the Cleethorpes–Humberston peninsula. However, occasional finds brought up from more deeply buried levels—most consistently along the coastline, where erosion can expose deposits down to about -3m OD or so, including the remains of the prehistoric forest that once covered the pre-inundation landscape (fig. 93)<sup>389</sup>—do confirm that the now drowned and buried landscapes of the Outmarsh and Boston–Wainfleet coast were inhabited both before their inundation and afterwards too. This last point can be most easily demonstrated in the East Fen,



Figure 93: The buried land-surface at Sutton-on-sea, as exposed in September 1921, with the tree roots still in situ (Source: N. S. Stevenson, ‘The submerged forest on the coast of Lincolnshire’, *Transactions of the Lincolnshire Naturalists’ Union* 1924, plate 2, made available by the Natural History Museum Library, London/[Internet Archive](https://www.internetarchive.org/), licensed under a [CC BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/) licence).

<sup>389</sup> Derrett and Selby, *Lincolnshire Coast Submerged Landscape*; Clapham, *Mid-Holocene Submerged Forests*; Leahy, ‘A dated stone axe-hammer from Cleethorpes’.

where Bronze Age finds cluster around the minor saltmarsh channels of the Neolithic to Early Bronze Age channel system that happen to be exposed at the surface there, and something similar may well lie beneath the Outmarsh areas of the coastal zone as well.<sup>390</sup>

Of course, we do have to be aware that the pre-medieval history of the coastal zone was not purely one of marine flooding; there were also considerable periods of marine regression, where the active coastline retreated and the former saltmarshes either dried out in part or were overlain by freshwater peats. Once again, these are best understood in the area between and inland of Boston and Wainfleet, where borehole records testify to multiple periods of inundation and regression and significant regional variations, which encourages us to be aware of local differences in the landscape evolution of this era. Thus, around Wrangle and Friskney there was an initial marine transgression followed by a regressive phase marked by peat growth in about 1550 BC, whilst in the Wainfleet basin there was a more complicated history involving three transgressive–regressive cycles before peat formation began around 1700 BC. Likewise, there was a renewed phase of marine inundation in the Low Grounds after 1400 BC, whilst in the Wainfleet basin the regressive phase continued, although from around 350 BC both areas saw a new marine transgression at the same time.<sup>391</sup>

In the Outmarsh, the peat records are less well-studied and distributed than they are in the Fenland, with the vast majority representing basal peats (formed by water-logging immediately prior to the initial marine flooding of the region), rather than ‘upper peats’ located between marine deposits and so being indicative of a period of marine regression and eastwards movement of the coastline. Furthermore, relatively few of the latter have radiocarbon dates attached to them. Nonetheless, there are a few such peats from the region—at Sutton-on-Sea, for example, there is a peat indicative of a regressive phase in around 3370–3100 BC, whilst some other finds of peat in the same region were made at higher elevations that can probably be correlated with a later prehistoric era or the Romano-British period.<sup>392</sup> Likewise, the ‘upper peat’ at Chapel Point dates a period of marine regression in this area to the second millennium BC, something also apparent inland too,<sup>393</sup> before seeing renewed marine inundation beginning around 1285–793 BC,<sup>394</sup> whilst at Ingoldmells a first millennium BC marine regression is followed shortly after by a period of transgression.<sup>395</sup> Though thin, the evidence thus would seem to offer a not too dissimilar picture to that found in better studied areas to the south.

What seems clear from both areas, furthermore, is that there was a clear period of marine regression in the Romano-British period, characterised by the silting up of some major roddons and the drying out of areas of former saltmarsh. So, we find Romano-British material scattered all across the top of the former great Witham roddon north of Boston and further inland, just as we find evidence for permanent Romano-British settlement and agriculture on the former saltmarshes of the Outmarsh at, for example, Hogsthorpe (where it sits above an Iron Age saltern active *c.* 773–539 BC),<sup>396</sup> Howdales (South Cockerington) and Marshchapel. This should not be taken to indicate that the landscape of the coastal zone was completely desalinated in this era, however. As was noted in the regional studies above, at least some of the north–south channels in Boston to Wainfleet area must have remained active marine channels in order that the significant Iron Age and Romano-British salt-

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<sup>390</sup> See, for example, the apparent interaction with recently submerged landscapes at Cleethorpes, noted in Leahy, ‘A dated stone axe-hammer from Cleethorpes’, as well as the various prehistoric sites and finds found eroding from the eastern coastline, as also observed by Derrett and Selby, *Lincolnshire Coast Submerged Landscape*, p. 13.

<sup>391</sup> Brew *et al.*, ‘Holocene sea-level history’, pp. 81–3.

<sup>392</sup> Brew, ‘Lincolnshire Outmarsh’, p. 24, calibrated with IntCal20 and Calib 8.20, and fig. 4 (BGS borehole 508412).

<sup>393</sup> Rackham *et al.*, *Triton Knoll*, fig. 14 relating to Hogsthorpe–Burgh parishes, see also pp. 11–12, 15, and Plate 1.

<sup>394</sup> Stenton *et al.*, *Former Sandilands Golf Club*, p. 15 and Table 2.

<sup>395</sup> Derrett and Selby, *Lincolnshire Coast Submerged Landscape*, 10–11.

<sup>396</sup> B. Kirkham, ‘The excavation of a prehistoric saltern at Hogsthorpe, Lincolnshire’, *Lincolnshire History and Archaeology* 16 (1981), 5–10 at p. 9; the reported uncalibrated radiocarbon date from the saltern hearth floor has been calibrated using the IntCal20 calibration curve via Calib 8.20—at 1 sigma this gives a range of 773–519 cal BC and at 2 sigma a range of 788–413 cal BC, with a median probability of 615 BC.

making industry could continue to flourish in that region, and the same is true right across the southern Outmarsh where saltern debris is found widely scattered. Similarly, James Rackham cautions that whilst the slightly higher ground at Howdales was probably suitable for settlement in the third century AD, the surrounding area may well not have been, and the main palaeochannel that flows past this site was probably still an active marine channel then.<sup>397</sup> At Marshchapel we have a parallel situation, with a permanent settlement being built on the dried out saltmarshes but once again being situated alongside a palaeocreek, and the settlement has been interpreted as one involved the end-stage processing and transportation of salt. A recently-excavated site close to the line of the Schalflet in Hogsthorpe parish shows comparable results too. Here, a period of Romano-British permanent settlement was recognised on the Outmarsh surface, with burials even taking place. However, at the same time, the site was located by a probable tributary of the main Schalflet trunk channel and is believed to have been associated with Romano-British era salt-production on the Outmarsh—as the excavator comments, ‘the burials may represent a family unit living adjacent to their source of work in the wetlands.’<sup>398</sup> As such, we should probably think of the Romano-British coastal zone as one that allowed significant settlement activity to take place, but also one that was still in many areas a coastal environment.

The Late/post-Roman era similarly saw changes all across the study region, with a widely evidenced period of marine inundation that deposited a metre or more of sediment on top of most Romano-British sites on the Outmarsh, at least. On the Outmarsh, it seems likely that almost all of the low-lying land was inundated in this period and the creek systems that we can trace here on Lidar have their origins in this final major marine transgression. Along the Wash coastline, the higher siltlands that became the location for early medieval and medieval permanent settlements were likewise created at this time. However, whilst the flooding reached well inland of the coast, significant areas of the zone between Boston to Wainfleet that were away from the coast are likely to have remained unflooded, not least the entire East Fen, which maintained its freshwater peat coverage through to the early nineteenth century. The subsequent usage of this renewed coastal wetland landscape in the early medieval period can be hard to trace beyond the roddons themselves. In particular, the vast majority of ‘early’ (fifth- to seventh-century AD) finds from the project zone come from the islands of higher ground that remained above the floods and the dry Middle Marsh margins, as with the finds from near Chapel Point, Cumberworth, Stain (Withern) and Burgh-le-Marsh. Nonetheless, there are a bare handful of such early finds known from the Outmarsh itself, including two sixth-century pieces of metalwork found at Nettle Hill, Burgh-le-Marsh, next to a major channel, which might help demonstrate continued exploitation of the rich resources offered by these extensive saltmarshes in this era.<sup>399</sup>

In the Middle Saxon period we get slightly more physical evidence, with a scattering of finds in both the Saltfleet and Burgh-le-Marsh/Ingoldmells areas, along with a single sherd found close to saltern mounds in Wrangle and a significant number of finds in the area around Fishtoft, including a possible Middle Saxon saltern, all of which confirms that some sort of activity was taking place then in and around the creek systems then, probably primarily to do with salt-making. We do, however, need to be wary of declaring the pre-Viking marshes largely abandoned in this and the preceding era on the basis of an absence, or near absence, of evidence. Not

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<sup>397</sup> *Saltfleetby Gas Storage Project, Lincolnshire: Grayfleet Gas Storage Facility*, pp. 2, 41, 47–52; the channel into which second- to third-century AD Roman material was dumped at Saltfleetby St Peter is also considered likely to have been an ‘active tidal creek’ at that time: Heritage Trust of Lincolnshire, *Notes on a site visit to Saltfleetby St. Peter, July 2003* (2003), p. 6.

<sup>398</sup> C. Christie, *Triton Knoll Electrical System Lot 1 and Lot 2 Mitigation – Volume 1: Post Excavation Analysis* (Headland Archaeology, 2019), pp. 22–3.

<sup>399</sup> There is also a single sherd of pottery in a potential Early Saxon fabric from a Romano-British saltern site in Croft parish, near to Croft Bank; in the initial reports—B. Whitwell and C. M. Wilson, ‘Archaeological notes, 1968’, *Lincolnshire History and Archaeology* 4 (1969), p. 104, and C. M. Wilson, ‘Archaeological notes, 1969’, *LHA* 5 (1970), p. 7—the pottery is all described as Roman, but a re-examination of the pottery by Alan Vince and Jane Young for the *East Midlands Anglo-Saxon Pottery Project* led to the suggestion that some may, in fact, be Early Saxon (J. Young, *pers. comm.*).

everyone by any means made use of ‘Anglo-Saxon’ material culture in fifth- to seventh-/eighth-century Lincolnshire. Indeed, a recent detailed analysis suggests that for much of this period, only a minority of the population of Lincolnshire may have done so and thus been, in effect, ‘archaeologically visible’ to us. Certainly, very few finds of metalwork of this era are, in fact, known from the entire Fenland region, despite other evidence showing that these areas were definitely inhabited then, which is suggestive in the current context.<sup>400</sup> Equally suggestive may be the fact that, in the southern Fenland, there is some evidence to suggest that some of those who were active there in the first centuries of the early medieval period, and who perhaps didn’t use ‘Anglo-Saxon’ metalwork, actually spoke Archaic Welsh or similar, not Old English—in this light the fact that the Domesday name for Skegness, *Tric*, appears to be a Latin name passed into English via an Archaic Welsh intermediary is certainly intriguing.<sup>401</sup>

Only really from the ninth century do these issues over the possibility of significant archaeologically invisible populations start to ease, as most acculturation (adoption of ‘Anglo-Saxon’ material culture and language) is believed to have occurred by this point.<sup>402</sup> Whatever the case may be, it is noteworthy that only in the Late Saxon/Anglo-Scandinavian period do we start to get significant numbers of finds from the coastal marshes themselves.<sup>403</sup> These show significant landscape exploitation taking place all along the coastline, probably focussing primarily on salt-making. Certainly, the great blocks of salterns running from Leake to Wainfleet and from Tetney to Grainthorpe are believed to have their origins in this era, as is the important early tenth-century saltern at Marshchapel. Interestingly, a lot of these finds in the northern Outmarsh, around Theddlethorpe to Skidbrooke, are focussed around the great saltmarsh creeks, with finds from the end of the period starting to come from the tops of these roddons, indicating that the creeks here were probably still a significant feature at the start of the era, but were probably silting-up or extinct towards the end of it and becoming a focus for settlement. This chronology doesn’t hold everywhere, however. In the southern and northernmost Outmarsh, there is a fair amount of evidence for active marine channels and inlets continuing to operate into the medieval period proper, not least in the Tetney and the Schalflet areas, whilst the evidence from the vicinity of Grainthorpe and Marshchapel suggests a gradual and complex process of sea-defence and then desalinisation. Something similar seems to hold along the Wash coastline too, with Friskney seeming to be cut off from the sea probably by the end of the Late Saxon period, whilst the havens at Leake and Wrangle appear to remain open for some considerable period of time, though here the haven looks to have eventually migrated seaward by the end of the medieval period.

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<sup>400</sup> See further Green, *Britons and Anglo-Saxons*, pp. xxx, lvii, 10, 13, 170–85 and *passim* on the question of British/Welsh-speakers living largely archaeologically invisibly side-by-side with people using ‘Anglo-Saxon’ material culture in the fifth to seventh/eighth centuries, with perhaps a higher concentration of such people present in the Fenland districts. See also on this, for example, S. Oosthuizen, ‘Culture and identity in the early medieval Fenland landscape’, *Landscape History* 37 (2016), 5–24 (pp. 16–17) and Oosthuizen, *Anglo-Saxon Fenland*, pp. 38–9.

<sup>401</sup> Green, *Britons and Anglo-Saxons*, pp. 110–11, 176–8, 180 (map), 182, 234; Owen and Coates, ‘*Traiectus/Tric/Skegness*’; Oosthuizen, ‘Culture and identity’. Another possible British/Welsh name from the study area may be the lost *ad Cricum* in Freiston on the Wash Silts (Green, *Britons and Anglo-Saxons*, p. 220), whilst the name of the island of Cumberworth may have as its first element OE *Cumbre*, ‘the Britons, Welsh’ (A. D. Mills, *A Dictionary of English Place-Names* (Oxford, 1991), p. 99). Also of interest may be the fact that one pre-English river-name from the region survives to today, the Lymn (Cameron, *Dictionary*, p. 84), and another is preserved in the name of a village on its course, which must have been named in probably the eighth century or after and when the British name for the river was still being used—this is the Lud, formerly known as the Cocker (‘crooked river’), as demonstrated by the name Cockerington, see further Green, *Britons and Anglo-Saxons*, p. 231.

<sup>402</sup> See Green, *Britons and Anglo-Saxons*, *passim*, and now also J. Kershaw and E. C. Røyrvik, ‘The ‘People of the British Isles’ project and Viking settlement in England’, *Antiquity* 90 (2016), 1670–80, who argue that the genetic evidence collected by the ‘People of the British Isles’ project points to an Anglo-Saxon/British ‘admixture’ event (*i.e.* the period of significant interbreeding between immigrant and Romano-British lineages) occurring in around the year AD 700, primarily spanning the mid-seventh to mid-eighth centuries.

<sup>403</sup> Note, the major place-names of the northern Outmarsh also seem to stem from this period or after, in contrast to those of the settlements on the Middle Marsh edge, which tend to be Old English in origin, see fig. 5.

This same era also sees the first solid evidence for the ports along the Lincolnshire coast starting to function, with Grimsby and Boston likely to have their origins in the eleventh century at least, as do Swine, Mar and Saltfleet Havens. Whether these were functioning earlier than this is impossible to say, although some imported Middle Saxon Ipswich ware is known from Fishtoft. It is, however, worth noting that the two major pre-Viking trading centres that we know of on the Lincolnshire coast, at South Carlton (near Louth) and Garwick (near Heckington), were situated on the edge of the Middle Marsh and on the Fen Edge, respectively, and at the most inland point of a major trunk roddon, not out in the Outmarsh/Fen itself or close to the channel's mouth, which is perhaps telling.<sup>404</sup> On the other hand, it is intriguing to observe that at least one of the Old English *tōt-hyll*, 'look-out hill', names discussed above as being part of a Viking-era Anglo-Saxon system of coastal defence all down the Lincolnshire coast was located on the marine silts near to Boston at Fishtoft, which might hint at some further early importance for this already interesting area of the coastal zone.

By the time we reach the period around the twelfth to thirteenth centuries, the situation along the coastal zone seems to have stabilised somewhat, at least for the most part. Much of the land from Tetney down to Chapel St Leonards seems by now to be protected by sea-banks, with both place-names and 'long lands' found inland of these banks suggesting the existence of wide, common wetland pastures utilised for summer grazing here that were being gradually divided—at least in the northern Marsh—from the eleventh/twelfth century onwards, whilst the now largely dry and protected eastern edge of the Outmarsh was increasingly colonised by new villages like Mablethorpe (first mentioned in Domesday Book) and Marshchapel (whose origins seem to lie in the later twelfth–thirteenth centuries), and salt-making continued to dominate on the open coast. The coastline at this time was studded by small ports, some more important than others, not least that of Saltfleet Haven, almost all which were situated on or around the major creeks of the early medieval coast. Further south, there continued to be a degree of complexity, however, with sea-banks apparently constructed to the north, south, east and west of the coastal strip on which the settlements of Addlethorpe, Ingoldmells, Winthorpe and Skegness all stood, whilst at the tip of this protected 'promontory' lay the port of Old Skegness, probably a former fortified Roman ferry-port reused as a haven town and reportedly the best anchorage on the late twelfth-century Lindsey coast. The protection of this strip from all directions may reflect the fact that in this area, as perhaps at Tetney, the landscape still remained at least partially open to the sea, notably around the eastern mouth of the Schalflet (north of Addlethorpe) and perhaps in the area between Skegness and Croft, where there may have been a wide inlet through into perhaps the later medieval period. Moving further south, the other great medium-sized port



Figure 94: A visualisation of the vivid description of people taking refuge on a roof to escape the sea, based ultimately on Holinshed's description of the flooding of Mumby Chapel (Chapel St Leonards) in 1570, cited above (Source: Louis K. Harlow, in Jean Ingelow, *High Tide on the Lincolnshire Coast* (Boston, 1892), [Library of Congress](#), Public Domain).

<sup>404</sup> For Garwick and its location, see for Green, *Britons and Anglo-Saxons*, pp. xli, xlvi–xlvi, lxviii, 192–4, 196–200, 227, 229–30, 276—its location at the end of a major roddon is discussed on pp. xlvi and lxviii.

of the Lincolnshire coastline, Wainfleet, had also been founded by this time, sitting dry atop the high land created by the saltern mounds of the Tofts.

In the late thirteenth century and after, things become ‘dynamic’ once more. Perhaps the most dramatic change comes with the apparent destruction of the protective line of offshore coastal barrier islands in the late thirteenth and perhaps early fourteenth centuries, which left the eastern coast open to the full ferocity of the North Sea. In consequence, most of the medieval sea-banks all down the east coast have been lost to coastal erosion over the thirteenth to seventeenth centuries, aside from a surviving strip between Sandilands and Chapel Point, along with settlements such as Mablethorpe St Peter and Old Skegness. Conversely, around the same time the great ports of the coast reached the peak of their prosperity, with Boston becoming arguably the second-most important port in the kingdom, and the 1332 poll tax returns appearing to show considerable wealth all along the Wash coast and Marshland (fig. 95).<sup>405</sup> Unfortunately, this rise was in almost all cases followed by a late medieval and post-medieval fall, partly caused the increasing coastal erosion that destroyed towns and livelihoods, but also resulting from wider economic changes and the fact that the coastal ports from Boston to Grimsby were starting to significantly silt up and see a decline in their trade.<sup>406</sup> Indeed, by the time we reach the sixteenth and seventeenth centuries, the Lincolnshire ports were clearly starting to struggle to survive, and in a number of cases the only way they were able to stay open is to move increasingly far away from the settlements with which they were associated, as was seen with Swine/Grainthorpe, Saltfleet and Wainfleet Havens, and perhaps Wrangle/Leake too. This situation was in many ways made worse by the great reclamations that took place all along the Wash coast and in the Somercotes–Humberston area from the mid-sixteenth century, which greatly widened the coastline here, forcing the surviving havens to move ever further away from their original sites or cease to trade entirely.

This was, in many ways, simply the natural end-point of the great de-watering/desalinisation and reclamation of the coastal zone, but the effect was dramatic. As the ports and havens ceased to be the mouths and outfalls of great creeks, or became choked with saltern mounds in some cases, the havens naturally became more difficult to keep open. Some communities, like those at Wainfleet and Saltfleet in the thirteenth and fourteenth centuries, tried to remedy this by redirecting the fresh waters of surrounding rivers through the havens, although other (such as the men of Grimsby) were rebuffed when they attempted this—in any case, it seems not to have done any lasting good. None of the ports of the Lincolnshire coast can really be said to be in robust health in the post-medieval period, and this economic misfortune for the coastal zone was compounded by the ending of the great Lincolnshire salt-making industry in the early seventeenth century. The consequences of all this were stark. From being what looks like an extraordinarily populous and rich area of the county in the fourteenth century, benefitting from the trading opportunities provided by some of the great ports of England being located here, as well as an



Figure 95: Settlements with more than 50 taxpayers in 1332, showing the size and wealth of the villages and ports of the Lincolnshire Marsh and the Wash coastline (after Platts, 1985).

<sup>405</sup> G. Platts, *Land and People in Medieval Lincolnshire* (Lincoln, 1985), pp. 192 (fig. 65), 195–6.

<sup>406</sup> Good discussions of this decline can be had in, for example, Rigby, *Medieval Grimsby*; Rigby, ‘Medieval Boston’; and Pawley, *Lincolnshire Coastal Villages*.



abundance of wide grazing lands and valuable salt-making sites, the Wash coast and Marshland in the seventeenth century had become markedly poorer. As Thirsk notes, whilst most inland villages were able to maintain their population levels from the sixteenth to the eighteenth centuries, in the coastal zone there had been a veritable population collapse both in the villages and in the ancient towns like Grimsby, whilst the threat of erosion continued to play havoc from Mablethorpe down to Skegness. Combined with changes in the usage of the grazing lands in this era, it would seem that the Marshland had become noticeably impoverished when compared to the rest of Lincolnshire.<sup>407</sup>

Nonetheless, further changes were to come at the end of the eighteenth century and into the nineteenth that offered at least the hope of a return to prosperity. Although Skegness, for example, was little more than a hamlet in the later eighteenth century, the Georgian fashion for bathing offered it and other places along the coast a new lease of life. At Skirbeck, Boston Scalp/Fishtoft, Freiston, Skegness, Ingoldmells, Sutton, Mablethorpe, Saltfleet and Cleethorpes, well-appointed bathing inns were established by the early nineteenth century, and in many cases these formed the seeds for the emergence of a whole new urban and resort landscape along the coastal strip. Some of these seeds did, of course, fall on rather stony ground. This is in part because river-bathing, as practiced at Skirbeck and Boston Scalp/Fishtoft, understandably dropped out of fashion in favour of beach and dune sites, and partly because of saltmarsh growth between the inns and the sea at Freiston and Saltfleet, which made them notably less attractive as the nineteenth century wore on. At the other sites, however, bathing took root: at Mablethorpe, over 4,000 ‘pleasure-seekers’ descended on the coast here in a single day in August 1871, whilst at Cleethorpes the original bathing inn—the Dolphin—and its two or three associated lodging-houses ballooned to three bathing inns and 106 lodging-houses by the mid-nineteenth century. The arrival of the railway was the final necessary ingredient for these towns to become fully established along the coast. When Cleethorpes got its branch line in 1863, 30,000 people subsequently arrived by train on 3 August of that year, along with another 10,000 who arrived via the road, and by the end of the nineteenth century it was home to nearly 40,000 people, a far cry from its character at the start of that century.

If the ‘new towns’ of the Lincolnshire coast prospered and created new landscapes here, the great old towns also saw an opportunity to regain at least some of their former glory in this era. Whilst the former medium-sized port towns of Saltfleet and Wainfleet never really recovered their medieval importance, and places like Wilgrip and Grainthorpe Haven declined into relative unimportance, both Grimsby and Boston saw strenuous efforts to ensure that they might return to their former prosperity. At Grimsby, the decline in fortune was finally reversed by the attempts to restore its harbour at the start of the nineteenth century and then by the construction



Figure 96: Eighteenth- and early nineteenth-century bathing inns and places along the coastline of Lincolnshire; yellow stars indicate sites recorded pre-1800, pink pre-1850. Also shown are the late eighteenth-century coastline after Armstrong 1779, who recorded where dunes and saltmarsh were to be found, and the nineteenth-century railway network (which is thought to have heavily influenced which resorts would become towns).

<sup>407</sup> Thirsk, *English Peasant Farming*, chapter 6, offers a thorough discussion of the state of the Lincolnshire Marsh in this era and the roots of its issues; she also discusses the threat of erosion from the sea, although see also Owen, ‘Upkeep of the Lindsey sea-defences’, for this threat in the post-medieval era.

of new docks in the mid-nineteenth century, with the result that it became one of the fastest growing towns in the country, whilst Boston too was revitalised by works designed to make it once more a busy port, including improvements to the river channel and the construction of new docks.

What lies next for the coastal landscape of Lincolnshire is uncertain, although the fundamental fact that almost the entire area inland from the coast is situated a metre or more below the current mean spring tide high-water mark suggests that changes may not be far away, given the predicted sea-level rises of the next decades, centuries and millennia.<sup>408</sup> Indeed, it could be that, whilst the towns will perhaps be protected, the great expanse of the Outmarsh and Low Grounds might find itself rather closer in character to how it looked in the early medieval period or even the Bronze Age than today, with repeated marine transgressions recreating the lost saltmarshes. Furthermore, whilst it seems unlikely that the ancient creek systems will be revived as part of this—the channels represented by the roddons are now thoroughly extinct and choked—it seems credible that these remarkably long-lived creeks, which ultimately dictated so much of the landscape history of the Lincolnshire coastline, may yet have a role to play in controlling its future character too, given that they now stand above the surrounding land and so will concentrate and direct any future water flows across this area.<sup>409</sup>

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<sup>408</sup> See, for example, P. U. Clark *et al*, ‘Consequences of twenty-first-century policy for multi-millennial climate and sea-level change’, *Nature Climate Change* 6 (2016), 360–9 and supplementary data, for some worrying potential models of future sea-level rise in the medium- to long-term (though shorter in scale than the period covered by the present work).

<sup>409</sup> As also noted by Smith *et al*, ‘Roddons and their significance’, p. 268, and J. A. Zalaziewicz *et al*, ‘An Anthropocene landscape: drainage transformed in the English Fenland’, in J. M. Kelly *et al* (eds), *Rivers of the Anthropocene* (Oakland, 2018), pp. 75–83 at pp. 82–3; this is perhaps particularly the case in those areas where the roddons are most easily traced and stand relatively high compared to the surrounding landscape. The great plateaus created by the medieval salt-making industry around Wainfleet and Marshchapel, whose highest parts regularly reach 4–5m OD or more, are likewise likely to have a significant impact on the character of future flooding, just as they did in 1953, see F. A. Barnes and C. A. M. King, ‘The Lincolnshire coastline and the 1953 storm flood’, *Geography* 38.3 (1953), 141–60 at pp. 146–8, and fig. 146 in this report.

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# 3

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## Thematic Summaries

# 1 Discovering Western Doggerland: the Lost Landscapes of the Lincolnshire Coastline

## Introduction

The present-day Lincolnshire coastal zone is a flat landscape of reclaimed marine alluvium broken up by occasional minor ‘hills’ that seldom rise above 8m OD or so. Some of these hills, especially between Grainthorpe and Tetney in the north and the Tofts in the Wainfleet area, are man-made, the spoil mounds from the great medieval salt-making industry that operated here. Others, however, are natural mounds of clay, gravel and sand deposited at the end of the last glaciation (*c.* 29,000–14,700 years ago) and which protrude through the flat alluvial plain, the last remnants of a rolling, undulating prehistoric landscape here that was flooded by the sea from around 8,000 years ago through to the medieval period. This landscape was laid down by the melting glaciers on top of a flat wave-cut chalk platform that had been created when high sea-levels about 125,000 years ago eroded away the Lincolnshire Wolds. As the glaciers melted, sea-levels rose by over 120m from their nadir, gradually transforming eastern Lincolnshire from a relatively upland landscape located above the vast lowland plain of Doggerland—now the bottom of the North Sea—into a slowly submerging zone of low hills and shallow valleys, and then a flat, broad landscape of islands, creeks and coastal marshes.

## Before the floods: the character of the Palaeolithic and Mesolithic landscapes of the Lincolnshire coastal zone

The physical structure of the Lincolnshire coastal zone has seen dramatic changes over the period since the first hominids were active in eastern Britain, around 900,000 years ago.<sup>410</sup> Prior to the Anglian glaciation of *c.* 478,000–424,000 years ago, which buried Britain under ice as far south as North London, the landscape of the whole region looked very different indeed, with the Lincolnshire Wolds extending not only out to the current coastline, but also

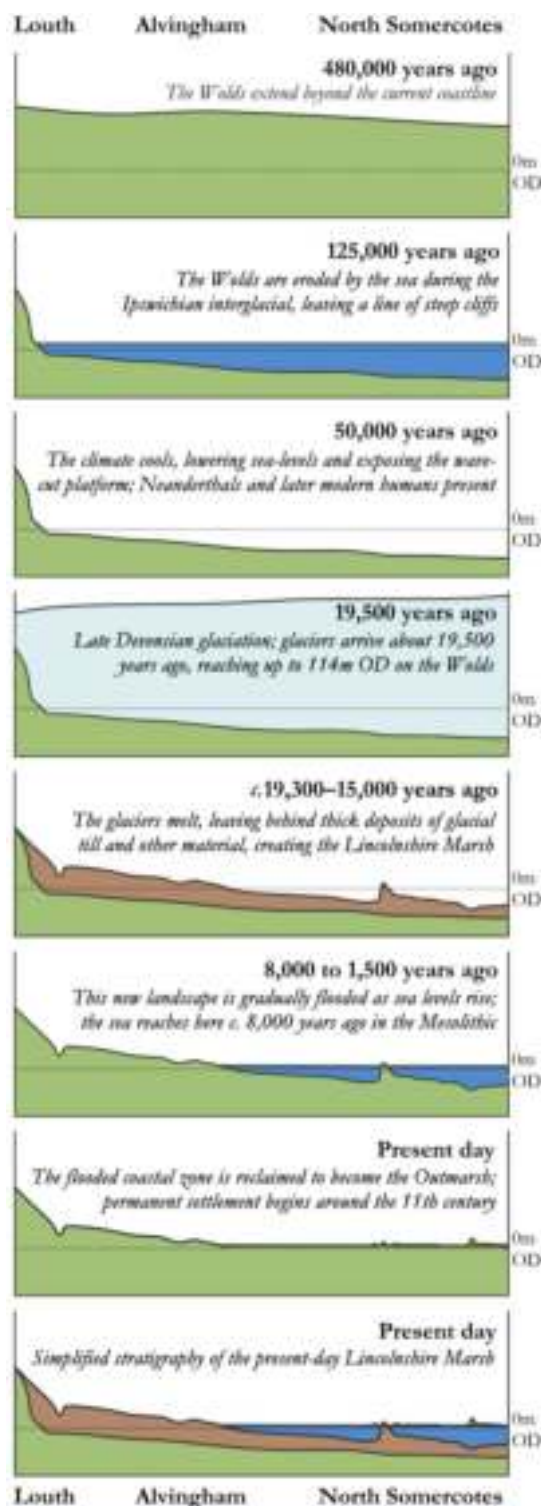


Figure 97: A simplified overview of the major landscape changes in the northern Lincolnshire Marsh, based on a borehole cross-section from Louth to Donna Nook (North Somercotes) and other data.

<sup>410</sup> The earliest evidence comes from northern Norfolk, see S. A. Parfitt *et al.*, ‘Early Pleistocene human occupation at the edge of the boreal zone in northwest Europe’, *Nature* 466 (2010), 229–33, and N. Ashton *et al.*, ‘Hominin footprints from Early Pleistocene deposits at Happisburgh, UK’, *PLoS ONE* 9.2 (2014), e88329.

probably for tens of miles beyond it, whilst the Fenland basin simply didn't exist.<sup>411</sup> The Fenland basin seems to have been created by repeated glacial periods, first beginning to form during the Anglian Stage and then seeing further erosion down to modern sea-level and below by about 135,000 years ago.<sup>412</sup> The Wolds, in contrast, probably eroded largely in warmer climatic periods, ending in the Ipswichian Interglacial around 127,000–116,000 years ago (MIS 5e). This latter period is thought to be one of the warmest in recent geological history, and Britain from Yorkshire southwards was inhabited by exotic fauna including lions, hyenas, hippopotamuses, straight-tusked elephants and rhinoceroses. It was also the era in which the Lower and earlier Middle Palaeolithic landscape of the Lincolnshire Marsh is believed to have finally disappeared entirely, as the sea gradually eroded this landscape away until it reached the modern eastern edge of the Wolds. It left behind a line of white cliffs with a beach at its foot (located at around +1 to +3m OD) and a wide, wave-cut chalk platform that sloped gently down from the foot of the cliff to well beyond the current coastline—the present-day Louth hospital and cemetery stand roughly on this cliff-edge, and the Lincolnshire Marshes and coastline now lies above the ancient wave-cut platform.<sup>413</sup>

Eventually, this period of warm temperatures and relatively high sea-levels came to an end, to be followed by an erratic decline into a colder era (MIS 4) that saw sea-levels remain significantly below the present-day levels right through until after the start of the modern Holocene era. Indeed, sea-levels probably remained as much as 60–80m lower than today for much of the period from 71,000 years ago onwards, perhaps dropping to a low of around 100m below modern sea-level in MIS 4 (71,000–57,000 years ago) and -120m OD during the Last Glacial Maximum (the Late Devensian glaciation).<sup>414</sup> In consequence, the Ipswichian wave-cut platform would have been exposed for tens of thousands of years as a flat plain sloping gently eastwards, with Britain itself forming an upland portion of a western peninsula of the landmass of Europe, rather than an island, joined to the continent by what is now the bottom of the North Sea, an area usually termed Doggerland.<sup>415</sup> Unfortunately, just as any Lower Palaeolithic and earlier Middle Palaeolithic evidence for hominid activity in the area of the current Lincolnshire coastline has been destroyed by the erosion of the Wolds, so any evidence for Late Middle Palaeolithic and earlier Upper Palaeolithic activity on the exposed wave-cut platform (whether involving Neanderthals or, towards the end of this era, modern *Homo sapiens*) has been similarly erased—in this case by the

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<sup>411</sup> K. M. Clayton, 'Glacial erosion of the Wash and Fen basin and the deposition of the chalky till of eastern England', *Quaternary Science Reviews* 19.8 (2000), 811–22; P. L. Gibbard *et al*, 'Pleistocene glaciation of Fenland, England, and its implications for evolution of the region', *Royal Society Open Science* 5 (2018), 1–52.

<sup>412</sup> Gibbard *et al*, 'Pleistocene glaciation of Fenland', especially fig. 17.

<sup>413</sup> D. Robinson, 'The shaping of the Wolds', in D. N. Robinson (ed.), *The Lincolnshire Wolds* (Oxford, 2009), pp. 1–14 at p. 7; A. Straw, 'The erosion surfaces of East Lincolnshire', *Proceedings of the Yorkshire Geological Society* 33 (1961), 149–72; E. J. Whitehead and A. R. Lawrence, *The Chalk Aquifer System of Lincolnshire*, British Geological Survey Research Report RR/06/03 (Keyworth, 2006), pp. 1, 7, 12, 18, and figs 1.2, 1.3, 2.2, 2.8; N. G. Berridge and J. Pattison, *Geology of the Country Around Grimsby and Patrington* (London, 1994), pp. 41 (fig. 21), 43; H. H. Swinnerton, 'The physical history of East Lincolnshire', *Transactions of the Lincolnshire Naturalists' Union* 9 (1936), 91–100 at p. 95–6 and figures; C. Green, *The Origins of Louth: Archaeology and History in East Lincolnshire 400,000 BC–AD 1086* (Louth, 2014), p. 9. On global sea-level in the Ipswichian and the period in which it was probably above current sea-level, see, for example, R. E. Kopp *et al*, 'Probabilistic assessment of sea level during the last interglacial stage', *Nature* 462 (2009), 863–8, esp. fig. 4a.

<sup>414</sup> M. J. White, 'Things to do in Doggerland when you're dead: surviving OIS 3 at the northwestern-most fringe of Middle Palaeolithic Europe', *World Archaeology* 38 (2006), 547–75 at p. 548; M. J. White and P. B. Pettitt, 'The British Late Middle Palaeolithic: an interpretative synthesis of Neanderthal occupation at the northwestern edge of the Pleistocene world', *Journal of World Archaeology* 24 (2011), 25–97 at p. 33; D. Smith *et al*, 'Quaternary sea level change in Scotland', *Earth and Environmental Science Transactions of The Royal Society of Edinburgh* 110 (2019), 219–56 at p. 226 (fig. 5). A variety of reconstructions of the coastline prior to the Holocene and during the period of the lowest sea-levels have been produced, such as those in B. J. Coles, 'Doggerland: a speculative survey', *Proceedings of the Prehistoric Society* 64 (1998), 45–81, and J. Harff *et al*, 'Sea level and climate', in N. C. Fleming *et al* (eds.) *Submerged Landscapes of the European Continental Shelf: Quaternary Paleoenvironments* (Chichester, 2017), pp. 11–49.

<sup>415</sup> On Doggerland, see for example Coles, 'Doggerland: a speculative survey'; V. Gaffney *et al*, *Europe's Lost World, the Rediscovery of Doggerland* (London, 2009); and J. Walker *et al*, 'A great wave: the Storegga tsunami and the end of Doggerland?', *Antiquity* 94 (2020), 1409–25.



Figure 98: Woolly mammoths, woolly rhinoceros and other fauna typical of western Europe in the Late Pleistocene, MIS 5–MIS 2 (Image credit: © 2008 Mauricio Anton/Public Library of Science, from C. Sedwick, ‘What Killed the Woolly Mammoth?’ *PLoS Biol* 6.4 (2008), e99, <https://doi.org/10.1371/journal.pbio.0060099>, reused in line with PLOS Biology’s CC BY 4.0 licence).

Late Devensian (MIS 2) glaciation, which saw the land-surface first scoured by an ice sheet and then buried as the ice retreated.<sup>416</sup>

Although it has been suggested that there was more than one glaciation of the Lincolnshire coastline after the Ipswichian, it is now increasingly clear that there was only a single, Late Devensian event.<sup>417</sup> This saw a North Sea Lobe of the British–Irish ice-sheet advance across the wave-cut platform until it reached the exposed cliff-line at the edge of the Wolds, before pushing over this and continuing a little further inland up to maximum height of 114m OD. The maximum limit of this glaciation has recently been demonstrated to have been attained around 19,500 years ago, before being followed by deglaciation and the retreat of the North Sea Lobe glacier from the region beginning around 19,300–17,400 years ago and ending by 15,000 years ago, if not earlier.<sup>418</sup> As the glaciers melted, they left behind a thick, hummocky layer of glacial till (the ‘Marsh Till’) that covered the whole of the Lincolnshire Marsh, parts of the eastern Wolds, and a large area seawards of the current coastline,

<sup>416</sup> Note, whilst the evidence may be lost in the coastal region, we know people were present in Lincolnshire in this era: Green, *Origins of Louth*, pp 9–10; T. W. Bee, ‘Classic blade core from Lincolnshire’, *Lithics* 20 (1999), 11.

<sup>417</sup> See now D. J. A. Evans *et al*, ‘A chronology for North Sea Lobe advance and recession on the Lincolnshire and Norfolk coasts during MIS 2 and 6’, *Proceedings of the Geologists’ Association* 30 (2018), 523–40. The idea of two glaciations is proposed in, for example, A. Straw, *The Last Two Glaciations in East Lincolnshire* (Louth, 2008), but has not been widely accepted and Evans *et al*’s model of a single Late Devensian glaciation provides the most convincing interpretation and timeframe published thus far. See also J. A. Catt, ‘The Pleistocene glaciations of eastern Yorkshire: a review’, *Proceedings of the Yorkshire Geological Society* 56.3 (2007), 177–207; J. A. Catt *et al*, ‘Quaternary: ice sheets and their legacy’, in P. J. Brenchley and P. F. Rawson (eds.), *The Geology of England and Wales*, second edition (Bath, 2006), pp. 429–68; and C. D. Clark *et al*, ‘Pleistocene glacial limits in England, Scotland and Wales’, in J. Ehlers and P. L. Gibbard (eds.), *Quaternary Glaciations – Extent and Chronology, Part I: Europe* (Kidlington, 2004), pp. 47–82.

<sup>418</sup> On the date of the maximum extent of the Devensian glaciation, the date of initial deglaciation and the deposition of glacial till across the Lincolnshire Marsh, and the extent of the glacial deposits standing above marine deposits as ‘islands’ in the central Outmarsh around Hogsthorpe, see Evans *et al*, ‘A chronology for North Sea Lobe advance and recession’; for the retreat of the North Sea Lobe, see M. D. Bateman *et al*, ‘The timing and consequences of the blockage of the Humber Gap by the last British–Irish Ice Sheet’, *Boreas* 47.1 (2018), 41–61, although the datings for the retreat given in this paper have been revised recently to suggest that deglaciation occurred earlier and more rapidly: D. J. A. Evans *et al*, ‘Retreat dynamics of the eastern sector of the British–Irish Ice Sheet during the last glaciation’, *Journal of Quaternary Science* 36.5 (2021), 723–51. Note, the maximum height of the surface of the glacier above the current Lincolnshire coastline may have been about 300m above modern sea-level (Bateman *et al*, fig. 11), although this can’t be shown in fig. 97.

burying the wave-cut platform and its associated chalk cliffs under tens of metres of these deposits, especially to the west (see fig. 97).<sup>419</sup> The pollen records from both Late Glacial eastern Britain and the Lincolnshire Marsh and Holderness areas suggest that this new glacial landscape was initially—after about 12,700 BC—a dry and open, treeless landscape of grasses and sedges, albeit with a growing presence of downy birch, willow and juniper, giving way to birch-pine woodland in drier areas and fen carr (including willow and birch) in wetland areas during the latter part of this period through to about 10,900 BC.<sup>420</sup> It is likely that, as animals like red deer, wild horses and mammoths migrated to Britain, they were followed by the groups of Ice Age hunters who lived off them—certainly, a handful of mammoth and probable mammoth remains that are likely to date from the Late Glacial era are known from the Lincolnshire coastal zone, presumably eroded or dug up from the Late Glacial landscape, such as the mammoth tooth discovered on the Ingoldmells foreshore, whilst a Late Upper Palaeolithic flint core of this era has been found near to the edge of the Outmarsh at Hasthorpe (Willoughby with Sloothby).<sup>421</sup>

In around 10,900 BC, there was a marked deterioration in the climate once again, with the pollen records from Aby Grange on the Middle Marsh and elsewhere in Britain confirming that the birch forest rapidly died off to leave a landscape of open tundra once more.<sup>422</sup> With the end of this cold period around 9,700–9,600 BC,

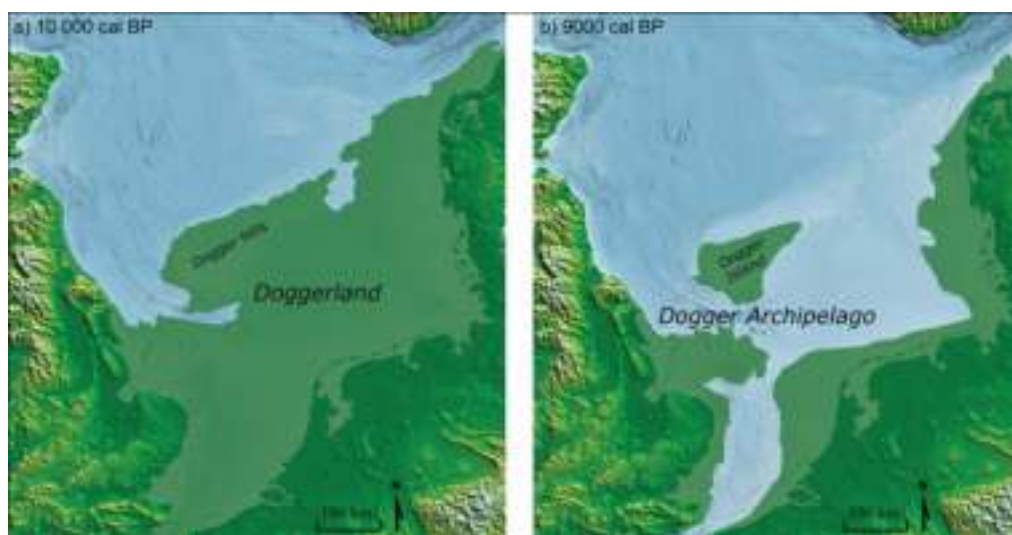


Figure 99: One reconstruction of the flooding of Mesolithic Doggerland: (a) the suggested area that was still dry land around 8000 BC; (b) the suggested area that remained dry land around 7000 BC (Source: extract of image by M. Muru, from J. Walker *et al*, ‘A great wave: the Storegga tsunami and the end of Doggerland’, *Antiquity* 94 (2020), 1409–25, <https://doi.org/10.15184/aqy.2020.49>, fig. 2, made available under a CC BY 4.0 licence).

<sup>419</sup> Swinnerton, ‘Physical history of East Lincolnshire’, pp. 97–8; S. Ellis, ‘Physical background to the Lincolnshire Marsh’, in S. Ellis *et al* (eds), *Wetland Heritage of the Lincolnshire Marsh* (Hull, 2001), pp. 7–12 at p. 7; Berridge and Pattison, *Grimsby and Patrington*, pp. 41 (fig. 21), 43; P. Davies and R. Van der Noort, ‘Prehistoric landscape development of the Lincolnshire coastal area’, *East Midlands Geographer* 18 (1995), 3–11 at p. 4. For the presence of glacial till and other deposits for a considerable distance seaward of the current coastline, see for example D. Brew, ‘Holocene lithostratigraphy and broad scale evolution of the Lincolnshire Outmarsh, eastern England’, *East Midlands Geographer* 20.1 (1997), 20–32 at pp. 25 and 26 (fig. 6, showing till extending at least 5.4km beyond the current coastline at Sandilands), and 28–9 and 30 (fig. 11, showing that the till continues for at least 4.7km offshore from Theddlethorpe St Helen), and A. H. W. Robinson, ‘The submerged glacial landscape off the Lincolnshire coast’, *Transactions of the Institute of British Geographers* 44 (1968), 119–32.

<sup>420</sup> See, for example, Davies and Van der Noort, ‘Lincolnshire coastal area’, p. 4; Ellis *et al*, *Lincolnshire Marsh*, pp. 23–5; R. Van der Noort, *The Humber Wetlands: The Archaeology of a Dynamic Landscape* (Bollington, 2004), p. 30; H. Fenwick, *The Lincolnshire Marsh: Landscape Evolution, Settlement Development and the Salt Industry* (University of Hull PhD Thesis, 2007), p. 57; Green, *Origins of Louth*, pp. 14–16.

<sup>421</sup> Lincolnshire HER MLI41635 (mammoth tooth) and MLI97878 (flint core); see also A. J. Jukes-Browne, *The Geology of Part of East Lincolnshire, including the country near the towns of Louth, Alford, and Spilsby* (London, 1887), p. 111, who records the discovery of ‘an elephant’s leg’ at Theddlethorpe at a depth of around 37 feet (11.3m) below the current ground level.

<sup>422</sup> Ellis *et al*, *Lincolnshire Marsh*, p. 25; Van der Noort, *Humber Wetlands*, p. 30.

however, the glacial period finally permanently gave way to the ongoing Holocene Interglacial and the associated new Mesolithic era. As temperatures quickly rose back to levels equivalent to the modern era, birch trees re-expanded from their glacial refuges to form a largely open landscape with a birch woodland whose canopy grew increasingly dense and eventually shaded out other plants, whilst in some wetland areas like the stream valley recently investigated in Hogsthorpe parish there was a willow carr landscape. This birch forest was replaced in turn by a hazel and elm dominated woodland (with an ivy and bracken understorey) on the glacial till of the Lincolnshire Marsh, with a mixed deciduous woodland then developing from around 8000 BC, dominated by lime, oak and hazel, alongside birch, elm and ash, and with alder foremost in areas of increasingly wet and damp ground from around 5300 BC.<sup>423</sup>

## The drowning of ‘Western Doggerland’ and the emergence of the Lincolnshire coastline

It was into this new, forested, hummocky, glacially-deposited landscape that the waters of the North Sea first started to make inroads from around 6000 BC or so, as was discussed in Section 2. At the start of the Mesolithic, the enormous lowland plain of Doggerland was still very much in existence, with what is now the low-lying Lincolnshire coastal zone being then the upland periphery of this vast basin. Although sometimes treated as little more than a temporary ‘land bridge’ between Britain and the Continent,<sup>424</sup> Doggerland’s importance in the Mesolithic period is now increasingly recognised, particularly considering the 3D seismic data collected by the North Sea oil and gas industry. This material has recently been used to reconstruct the drowned landscape of Doggerland in far more detail than has previously been possible, and it is now clear that North Sea floor constituted, in the Mesolithic period, a rich landscape of lakes, hills, river valleys, plains, tidal inlets and saltmarshes.<sup>425</sup> Both the rate at which the water rose and the changing extent of Doggerland through the Mesolithic era have been the subject of much study, but the first indications that marine waters were starting to flood the current Lincolnshire coastal zone come from around 6500–6000 BC, when mean sea-level was around 14 metres or more below its current level.<sup>426</sup> The flood waters thereafter continued to rise over the next few

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<sup>423</sup> Fenwick, *Lincolnshire Marsh*, p. 57; Ellis *et al*, *Lincolnshire Marsh*, pp. 25–6; Van der Noort, *Humber Wetlands*, p. 31; J. Rackham, R. Scaife and C. Langdon, *Geoarchaeological Stage 4 Analysis: For the Triton Knoll Electrical Scheme*, Allen Archaeology and The Environmental Archaeology Consultancy Report Number AAL 2021012 (2020), pp. 56–7 (Anderby and Hogsthorpe) and generally 56–63; S. Derrett and K. Selby, *The Lincolnshire Coast Submerged Landscape: The Current Extent and Composition of the Submerged Forest Deposits from Mablethorpe to Skegness* (unpublished report, May 2020), pp. 9–10, 36–8 (Anderby Creek and Wolla Bank).

<sup>424</sup> See J. Walker *et al*, ‘A great wave: the Storegga tsunamis and the end of Doggerland?’, *Antiquity* 94 (2020), 1409–25, for recent reconstruction maps suggesting that Britain had become an island by around 7000 BC.

<sup>425</sup> See Gaffney *et al*, *Europe’s Lost World*.

<sup>426</sup> The first evidence for the start of saltmarsh conditions at Theddlethorpe date from sometime around 6000 BC, when relative sea-level was about -14.1m OD, based on a deposit located at -10.95m OD: I. Shennan *et al*, ‘Modelling western North Sea palaeogeographies and tidal changes during the Holocene’, in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 299–319, at p. 312. However, boreholes from elsewhere on the Lincolnshire Marsh and in the Witham valley certainly show the underlying glacial till landscape to lie below this level in some regions, as noted in the main analysis of Section 2—see especially the Theddlethorpe–Somercotes area (BGS boreholes, *e.g.* BGS borehole 507205 that shows till at more than 15.5m below the current ground level, which lies at less than +2.5m OD according to Lidar, and Berridge and Pattison, *Grimshy and Patrington*, fig. 27), the area along the coast at Sandilands and Skegness (the base of the valley at Sandilands lies around -14.2m OD, whilst boreholes at Skegness indicate the till level here drops to at least -12.6m OD: D. Brew, ‘Holocene lithostratigraphy and broad scale evolution of the Lincolnshire Outmarsh, eastern England’, *East Midlands Geographer* 20.1 (1997), 20–32), and the Witham roddon (BGS boreholes, *e.g.* 504218, at Boston Girls High School, which reaches down to 17.5m below the ground surface (*c.* -15.1m OD) without encountering any glacial till, and Rackham *et al*, *Triton Knoll*, p. 8). This suggests that marine influence may have been present in the coastal zone from before this time, perhaps back as far as when sea-levels were around -15 to -19m OD (allowing for a mean high-water spring-tide level of around +3m in this area), which would be around 8500–8000 cal BP, *i.e.* around 6500–6000 BC, based on the reconstructed mean sea-level curves in I. Shennan *et al*,



thousand years, inundating a greater and greater area of the landscape here, a process that is better understood for the northern Fenland than the Lincolnshire Marsh.<sup>427</sup> In order to more fully elucidate the process by which the post-glacial landscape of the latter area was transformed from one of forested clay hills and valleys into that of the modern flat alluvial plain, an analysis was consequently undertaken for this area utilising all accessible geological data, including borehole and auger records, archaeological excavations, nineteenth-century brick-pit records, and the various previous studies and reconstructions of the underlying landscape that are available. This allowed a model of the prehistoric landscape prior to its flooding to be created and the gradual inundation of the Outmarsh to be mapped with a reasonable level of detail. Some areas are naturally better recorded than others, especially along the coast (see fig. 2), and so the model has greater certainty in those areas, but even allowing for this, it does give us an intriguing idea of how the Lincolnshire coastal zone would have changed over time prior to the flooding reaching its highest level around 1,500 years ago. When combined with models of how the offshore portions of Doggerland originally looked, we can create palaeogeographic maps of the process, as seen in the images presented as fig. 92.

Such a reconstruction of the flooding of the Outmarsh suggests that the current coastal zone, as defined in this project, still occupied a relatively high elevation even as late as 6500 BC, although parts of the landscape around Wainfleet/Burgh-le-Marsh, Skegness, Sandilands and the area from Theddlethorpe to North Cotes sat somewhat lower. The underlying Mesolithic landscape here, which generally lies at elevations between -2.5m and -15m OD, was probably crossed by notable valleys that cut into the till and which, in a number of cases, seem to be related to the roddons that existed through to the early medieval period and beyond, such as the channel at Sandilands, the Schalflet near Burgh-le-Marsh, the Waithe Beck/Northcotes Haven, and the channels reaching the current coastline in the Saltfleet–Somercotes area.<sup>428</sup> Beyond the current coastline, there would seem to have been an area of higher ground of glacial origin which persisted too, ultimately becoming the foundation for the string of offshore coastal ‘barrier islands’, perhaps locally dune-capped, that are believed to have protected the Lincolnshire coast and allowed the wide saltmarshes and flats of this area to develop through until their destruction in the medieval period.<sup>429</sup> By around 6000 BC, however, reasonably rapid sea-level rise had led to low-lying areas like Theddlethorpe seeing the formation of saltmarsh, and this relatively rapid marine transgression continued through the Late Mesolithic period and Early Neolithic, so that much of the area of the

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‘Holocene isostasy and relative sea-level changes on the east coast of England’, in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 276–98 at pp. 283, 291, 293; see also Shennan *et al*, ‘North sea palaeogeographies’ on MHWST levels.

<sup>427</sup> For the Fenland, see M. P. Waller *et al*, *The Fenland Project Number 9: Flandrian Environmental Change in Fenland* (Cambridge, 1994), and D. S. Brew *et al*, ‘Holocene sedimentary evolution and palaeocoastlines of the Fenland embayment, eastern England’, in I. Shennan and J. Andrews (eds.), *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea* (London, 2000), pp. 253–73, although as Rackham *et al*, *Triton Knoll*, pp. 17–18, note, there are some issues with both. See now also D. S. Brew *et al*, ‘Holocene sea-level history and the coastal evolution of the north-western Fenland, eastern England’, *Proceedings of the Geologists’ Association* 126 (2015), 72–85. For the Lincolnshire Marsh, see especially Brew, ‘Lincolnshire Outmarsh’; Rackham *et al*, *Triton Knoll*; and Berridge and Pattison, *Grimsby and Patrington*, pp. 63–5.

<sup>428</sup> Note, such probable pre-inundation valleys cut into the till of the northernmost Outmarsh are also noted in Berridge and Pattison, *Grimsby and Patrington*, p. 63.

<sup>429</sup> See, for example, K. Pye *et al*, *Sand dune processes and management for flood and coastal defence Part 1: Project overview and recommendations*, Defra/EA Flood and Coastal Erosion Risk Management R&D Technical Report FD1302/TR (2007), p. 8; H. H. Swinnerton and P. E. Kent, *The Geology of Lincolnshire From the Humber to the Wash*, second edition (Lincoln, 1981), pp. 99–103; H. H. Swinnerton, ‘The post-glacial deposits of the Lincolnshire coast’, *Quarterly Journal of the Geological Society* 87 (1931), 360–75, especially pp. 370–2; Swinnerton, ‘Physical history of East Lincolnshire’, pp. 98–9; D. N. Robinson, *The Book of the Lincolnshire Seaside* (Buckingham, 1981), pp. 13, 17 (map), 20; Institute of Estuarine and Coastal Studies, *Humber Estuary & Coast* (Hull, 1994), p. 33; Natural England, *NA 101: Bridlington to Skegness Maritime Natural Area Profile* (Sheffield, 2013), pp. 11, 21; Natural England, *National Character Area profile: 42. Lincolnshire Coast and Marshes* (2015), p. 14; Museum of London Archaeology, *England’s Historic Seascapes: Withernsea to Skegness* (York, 2010), <https://doi.org/10.5284/1000104> (Skegness and Mablethorpe Coastal Waters Character Area).



Figure 100: A tree stump from the Late Neolithic forest exposed on the sea-front at Cleethorpes.

Outmarsh that was eventually to be flooded was inundated by around 3500 BC. The major exceptions to this occur along the boundary with the Middle Marsh (where the underlying Outmarsh is often close to the present-day land-surface), an area in the north in Tetney parish, another in the south around Croft and Burgh-le-Marsh, and the zone of the Hogsthorpe moraine, which still largely stood above the flooding and hadn't yet become a string of islands of various sizes. Although there were periods of marine regression, when peat temporarily formed on top of the new former saltmarshes and flats of this zone (the 'upper peats') and parts of the marsh became dry enough for permanent settlement (as in the Romano-British era),<sup>430</sup> in general a continuing upward trend for relative sea-level in the Lincolnshire coastal zone—albeit decreasing in speed over time<sup>431</sup>—meant that that the areas affected by these repeated inundations were buried by marine deposits that continued to increase in thickness through to the early medieval period, creating the flat, wide, exceptionally low plain studded by occasional 'islands' that now characterises the Outmarsh.

## The submerged forests of the Lincolnshire coast

Aside from the glacial till islands, like those on which Huttoft, Cumberworth and Fishtoft are situated (these being the tops of former hills and hillocks that remained above even the highest tides so far experienced in the Holocene), the most obvious remnants of this drowned landscape of 'Western Doggerland' can be seen along

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<sup>430</sup> See above, especially the concluding part of Section 2.

<sup>431</sup> See Green, *Origins of Louth*, p. 24, for a simplified curve of the rise in relative sea-level along the Lincolnshire Marsh (based on Shennan *et al.*, 'Holocene isostasy and relative sea-level changes', p. 291), which shows an increasing decline in the speed of change over time: the speed of the rise was generally rapid through to the start of the Neolithic (c. 4000 BC), when mean sea-level rose by c. 5m or more over the course of thousand years, decelerated through the Neolithic (c. 4000–2000 BC), which saw a rise of around 3m, and then followed a steady and slower pace of rise from about 2000 BC onwards (between 2000 BC and the start of the Roman era there was a relative sea-level rise of about 1.5m or so).

the Lincolnshire coast. At sites like Wolla Bank, near the North Sea Observatory, and Cleethorpes, the waterlogged remnants of the great Mesolithic to Neolithic forests that once covered the hummocky landscape are exposed at low tides or thrown up by the sea after storms. Here can be found fallen trees, stumps, and branches lying in a layer of peat that formed over the ancient soil as the rising tides prevented freshwater drainage, waterlogging the forest.

One of the earliest references to this ancient forest comes from 1799, when Joseph Correa de Serra published his account of a 1796 visit to see the forest with Sir Joseph Banks of Revesby, offering a detailed description of the remains visible then that is worth quoting from at length:

It was a common report in Lincolnshire, that a large extent of islets of moor, situated along its coast, and visible only in the lowest ebbs of the year, was chiefly composed of decayed trees. These islets are marked in Mitchell's chart of that coast [1765], by the name of the *clay butts*... In the month of September, 1796, I went to Sutton, on the coast of Lincolnshire, in company with the Right Hon. President of this Society [Sir Joseph Banks], in order to examine their extent and nature. The 19th of the month, being the first day after the equinoctial full moon, when the lowest ebbs were to be expected, we went in a boat... and soon after set foot upon one of the largest islets then appearing. Its exposed surface was about thirty yards long, and twenty-five wide, when the tide was at its lowest. A great number of similar islets were visible round us, chiefly to the eastward and southward... These islets, according to the most accurate information, extend at least twelve miles in length, and about a mile in breadth, opposite to Sutton shore... The channels between the several islets [*i.e.* the eroded lines of drainage from wave backwash], when the islets are dry, in the lowest ebbs of the year, are from four to twelve feet deep.<sup>432</sup>

He goes on to add that these 'islets', visited by him over the course of three days,

consisted almost entirely of roots, trunks, branches, and leaves of trees and shrubs, intermixed with some leaves of aquatic plants. The remains of some of these trees were still standing on their roots; while the trunks of the greater part lay scattered on the ground, in every possible direction. The bark of the trees and roots appeared generally as fresh as when they were growing; in that of the birches particularly, of which a great quantity was found, even the thin silvery membranes of the outer skin were discernible. The timber of all kinds, on the contrary, was decomposed and soft, in the greatest part of the trees; in some, however, it was firm, especially in the knots.... The sorts of wood which are still distinguishable are birch, fir, and oak...<sup>433</sup>

Unfortunately, these easily accessible coastal fragments of the pre-flood landscape of the Lincolnshire coast are under increasing threat. When they were first reported in the seventeenth and eighteenth centuries, the outcrops of clay and forest were, as noted above, around a mile wide at low-tide and extended for twelve miles down the coast, forming such a potential danger to navigation that they were marked on coastal sailing charts.<sup>434</sup> In contrast, by the 1920s, this width seems to have declined to only around a tenth of its earlier reported extent,

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<sup>432</sup> J. C. de Serra, 'On a submarine forest, on the east coast of England', *Philosophical Transactions of the Royal Society of London* 89 (1799), 145–56 at pp. 145–6, 147.

<sup>433</sup> De Serra, 'Submarine forest', pp. 146–7.

<sup>434</sup> Mitchell's 1765 coastal sailing chart is printed in Robinson, *Lincolnshire Seaside*, p. 51; C. Smith's *New Map of the County of Lincoln* (1804) also marks the 'clay huts' between Sutton and Anderby. De Serra's claim that the banks of clay islets were a mile wide seems to be confirmed by an account of 1696, wherein Christopher Merret says, of the area north of Ingoldmells, that 'I have seen the Roots of Trees, that have been Dug out of the Sands at low Water, near a Mile from the Shore, which I take to belong to Fir, the Bark smelling Aromatically, and somewhat like that of Fir-Timber' (C. Merret, 'An account of several observables in Lincolnshire, not taken notice of in Camden, or any other author, by Mr. Christopher Merret, Surveyor of the Port of Boston', *Philosophical Transactions of the Royal Society of London*, vol. 19, issue 223 (31 December 1696), 343–53 at p. 348; this account may well refer to trees seen at Mablethorpe, as Merret immediately goes on to talk about the threat that the sea poses there).



Figure 101: One of the tree stumps exposed on Monday, 13th August 2018 at Trusthorpe, Lincolnshire.



Figure 102: The Neolithic submerged forest outcrop at Wolla Bank, Lincolnshire, at low tide in September 2020, with the North Sea Observatory at Chapel Point visible in the distance.

and by the 1990s the width of the forest fragments visible had decreased again by about two-thirds.<sup>435</sup> At present, only a few small sections of ancient land surface are exposed by the lowest tides on the coast between Mablethorpe and Chapel Point, probably as a result of both the above erosion over time and recent beach replenishment works. For example, on 13 August 2018, an exceptionally low tide reaching down to about -3.35m OD exposed only two lone stumps above the waves, although wading a short way out beyond the shoreline revealed a number of additional tree stumps and the peat bed lying just below the water's surface.<sup>436</sup> More regularly exposed are the remnants of the forest and peat beds at Wolla Bank and Anderby Creek/Huttoft Bank, which seem to date from the Neolithic period, being finally submerged around 3200 BC or so.<sup>437</sup> The lowest tides here expose the in-situ eroded fragments of the old land surface with its covering peat bed and a variety of tree trunks, branches, stumps and roots. These exposures have been subject to a number of analyses over the years, most recently by Derrett and Selby, who identify the in-situ trees at Anderby Creek and Wolla Bank as oak and those at Trusthorpe as oak and pine,<sup>438</sup> whilst Clapham in the 1990s identified oak, ash, willow and alder at both Anderby and Wolla Bank, with birch also present at the latter.<sup>439</sup> Further north, at Cleethorpes, the underlying ground surface and its drowned forest is exposed again on the beach, although here the forest is slightly younger (around 4,500 years old) and is exposed more frequently to view, with a significant number of large fallen tree-trunks and stumps easily visible to the north and north-east of the railway station.<sup>440</sup>

Needless to say, this drowned forest atop the old glacial-deposited land-surface was not restricted to the area of the current coastline. De Serra reported that Sir Joseph Banks had directed that a boring be made inland in Mablethorpe parish to ascertain whether the 'islets of moor' continued inland and this did indeed find a layer of similar material 'about four feet thick',<sup>441</sup> and subsequent excavations and boreholes across the Outmarsh have revealed similar preserved 'forest beds' and trees buried under metres of marine clays, silts and sands there. In Hogsthorpe parish, for example, the trunks of large oak trees are found around 2m below the current land-surface, lying on a peat that rests on the pre-inundation surface and underneath a thick clay that is said to contain 'cockle shells in abundance', whilst at Thorpe St Peter a layer of trees resting on the original glacial-deposited landscape was encountered around 5m below the present-day surface and beneath a layer of shell-filled clay.<sup>442</sup> It is simply that, at the coast at Cleethorpes and between Mablethorpe and Chapel Point, the erosion of the overlying marine sediments is able to expose these ancient buried forests to easy view. Likewise, the reason that there are no beach exposures of this type between Mablethorpe and Tetney and in the Skegness area is that the original land-surface appears to have lain much lower in these parts of the Lincolnshire coastal zone, below the levels of even the lowest tides, and so never currently gets exposed to view (see further figs 42 and 92).

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<sup>435</sup> For a discussion, see A. J. Clapham, *The Characterisation of Two Mid-Holocene Submerged Forests* (Liverpool John Moores University PhD Thesis, 1999), pp. 62–4; D. N. Robinson, 'The buried forest of Lincolnshire', in N. Field and A. White (ed.) *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 6–10 at pp. 7, 9; Derrett and Selby, *Lincolnshire Coast Submerged Landscape*, pp. 13–15, 38–40.

<sup>436</sup> C. Green, 'The submerged prehistoric forests on Trusthorpe and Cleethorpes beaches, Lincolnshire', blog post, 16 August 2018, <https://www.caitlingreen.org/2018/08/drowned-forest-trusthorpe.html>.

<sup>437</sup> See above, Section 2, and Derrett and Selby, *Lincolnshire Coast Submerged Landscape*, Clapham, *Two Mid-Holocene Submerged Forests*, and M. Stenton *et al*, *Former Sandilands Golf Club, Alford, Lincolnshire: Archaeological and Geoarchaeological Desk-Based Assessment*, report 2021/106 (York Archaeology, 2021), pp. 14–15

<sup>438</sup> Derrett and Selby, *Lincolnshire Coast Submerged Landscape*, pp. 20, 22. Jukes-Browne, *Geology of Part of East Lincolnshire*, identified the stumps he encountered at Mablethorpe in 1881 as probably oak, birch and/or fir (p. 110), whilst the trees at Sutton and Trusthorpe in 1921–23 were birch and pine: N. S. Stevenson, 'The submerged forest on the coast of Lincolnshire', *Transactions of the Lincolnshire Naturalists' Union 1923* (1924), 32–41 at pp. 34–5, 39.

<sup>439</sup> Clapman, *Two Mid-Holocene Submerged Forests*, pp. 224–5, 257.

<sup>440</sup> See K. Leahy, 'A dated stone axe-hammer from Cleethorpes, South Humberside', *Proceedings of the Prehistoric Society* 52 (1986), 143–152; A. Sherman, 'Community archaeology around the English coastline', *Journal of the Council for British Archaeology Yorkshire*, 4 (2015), 25–8; Green, 'Submerged prehistoric forests'; and the online CITiZAN database and map at <https://citizan.org.uk/interactive-coastal-map>.

<sup>441</sup> De Serra, 'Submarine forest', p. 148.

<sup>442</sup> Jukes-Browne, *Geology of Part of East Lincolnshire*, pp. 105, 107.



Figure 103: Another view of the submerged forest outcrop at Wolla Bank, September 2020, with tree trunks visible lying across the top of the forest bed.



Figure 104: (a) A piece of bark embedded in 'moor', washed up to the south of Wolla Bank at Chapel Point (February 2020); (b) a branch embedded in the submerged forest deposit at Wolla Bank, Lincolnshire (September 2020).

## 2 Ports, Towns and Trade on the Lincolnshire Coast

### Introduction

The early coastal landscape of Lincolnshire was characterised by wide marshes, winding creeks (some hundreds of metres wide), large areas of sand and dunes, and occasional islands of dry land. This dynamic coastal zone saw considerable and increasing economic and settlement activity from at least the ninth century onwards, and by the medieval period there was a significant network of ports and havens all up the coast from Boston to Grimsby, many of which have an intimate connection to the network of creeks discussed in the previous section. The story of the ports and towns here is, however, one of vastly varying fortunes. Probably the oldest town along the coast was ‘Old Skegness’, which is often thought to have its origins as a walled Roman ‘small town’/ferry port, although it was only a relatively minor centre in the medieval period—albeit one possessing a castle, a guildhall and a harbour—and was utterly destroyed by the sea in the sixteenth century. Other ports and towns have their origins in the medieval period, saw dramatic rises in their fortunes, before declining and then, in some cases, rising anew, whilst yet others are new creations of the nineteenth and twentieth centuries, growing up around the old bathing inns of the Georgian coast, and a final few have lived only in the minds of their designers. The following account relies to a significant degree on the analysis presented in Section 2, looking first at the ancient ports and towns from Boston to Grimsby, before turning to look at the newer resort towns and the towns that never came to pass.

### The ancient ports and towns

#### A. Boston

The most famous of Lincolnshire’s seaports, Boston seems to have been founded relatively late (perhaps in the eleventh century) on a high early medieval channel deposit, or ‘roddon’, of the River Witham.<sup>443</sup> Nonetheless, by the twelfth century it was clearly a place of such importance that it came to the attention of the great Muslim scholar al-Idrīsī, working in Sicily in around 1154, being one of only three coastal towns he deemed worthy of note north of the Thames (the others being Great Yarmouth and Grimsby), whilst the Witham running from Boston to Lincoln is the only river he maps north of the Thames.<sup>444</sup> Indeed, in about 1200 Boston was second only to London in the scale of its overseas trade, and may even have exceeded it, whilst its population of around 5,500 people made it the tenth largest urban centre in fourteenth-century England.<sup>445</sup> Boston’s trading activity was initially largely based around the wool trade, for which it was England’s most important port, exporting wool from as far afield as Cheshire and Flintshire.<sup>446</sup> However, Boston also traded in wide range of other goods, including imported cloth from Flanders, wine from Gascony, Anjou and the Rhineland—it was from Boston that the royal wine cellars in the north were stocked—and wax, furs and hawks from Scandinavia, and exports such as lead from Derbyshire and salt from Lincolnshire, the latter reflecting the fact that Lincolnshire was the leading salt-producing area in England by 1300.<sup>447</sup> Boston consequently attracted significant numbers of migrants from an early date, so that in the fourteenth century around 3% of Boston’s population are thought to

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<sup>443</sup> See S. H. Rigby, *Boston, 1086–1225: A Medieval Boom Town* (Lincoln, 2017), on the early history of the town and above, Section 2 (‘The Wash coastline from Boston to Wainfleet’) for its location on a roddon.

<sup>444</sup> C. Green, ‘Al-Idrīsī’s twelfth-century description and map of Lincolnshire’, *Lincoln Record Society News Review* 18 (2021), 2–4.

<sup>445</sup> Rigby, *Boston*, pp. 1–2.

<sup>446</sup> S. H. Rigby, *Boston and Grimsby in the Middle Ages* (University of London PhD Thesis, 1982), pp. 175–6, 195–6.

<sup>447</sup> S. H. Rigby, ‘Medieval Boston: economy, society and administration’, in S. Badham and P. Cockerham (eds), *The beste and fayrest of al Lincolnshire: The Church of St Botolph’s, Boston, Lincolnshire, and its Medieval Monuments* (Oxford, 2012), pp. 6–28



Figure 105: The North Sea and the east coast of England on al-Idrisi's mid-twelfth-century Arabic map, from a mid-thirteenth- to early fourteenth-century copy. Note, north is at the bottom and south at the top; the river running across the centre of the image is the Witham with Boston on the left and Lincoln on the right, whilst Grimsby is shown on the coast to the north of the river (Source: Bibliothèque nationale de France, Département des Manuscrits, Arabe 2221, f. 338v–339r; PD).

have been born outside of England, and in the fifteenth century Boston inhabitants included people born in the Netherlands, France, Scotland, Germany and Norway, some of whom are believed to have run inns in the town.<sup>448</sup>

Nonetheless, despite its wealth and connections, Boston saw a major collapse in its trade towards the end of the medieval period. By 1400, Boston's alien (non-English) trade in wool, wine and wax had almost disappeared, whilst the town's fair was no longer of any great importance, but Boston's economy continued to thrive, and the leading men of the town were international merchants. In contrast, by the sixteenth century Boston's population had probably halved and its overseas trade had collapsed, with its role as a major wool trading town in sharp decline—at the start of the fourteenth century, it was exporting around 10,000 sacks a year, in the early fifteenth century 2,500 sacks, but by the 1540s only 200 sacks per year, and Boston's wine imports suffered a similar deterioration. This was in part caused by changing national trends, including the concentration of trade through London, and the decline of Lincoln, but it was arguably made worse by silting in the Witham and flooding from the sea in the town. Whilst Boston remained a regional centre, it lost its wider significance.<sup>449</sup> This all led to contraction in the town, although from the eighteenth century there was a degree of recovery, especially after the construction of the Grand Sluice in 1764–6 (which allowed larger ships to enter the river), the straightening of the river to the Wash, and the construction of the docks in 1884.<sup>450</sup>

## B. Toft, Leake, Wrangle and Friskney Havens

The havens of Toft, Leake, Wrangle and Friskney formed a line up the coast from Boston to Wainfleet. Toft Haven, between Fishtoft and Freiston, is mentioned in the early nineteenth century, when it was said that a 'creek of considerable magnitude' once flowed from the neighbourhood of Fishtoft church to the neighbourhood of the Hob-hole Sluice, with fishing boats claimed to have been still able to sail up to near the

<sup>448</sup> W. M. Ormrod *et al*, *Immigrant England, 1300–1550* (Manchester, 2019), pp. 22, 50–1, 108, 112, 131–2, 142, 144, 176; J. Mackman, 'Lincolnshire', *England's Immigrants 1330–1550: Resident Aliens in the Late Middle Ages*, online resource, <https://www.englishimmigrants.com/page/sources/alien-subsidies/the-east-midlands/lincolnshire>, accessed 2021, 2022.

<sup>449</sup> See further Rigby, 'Medieval Boston'.

<sup>450</sup> N. Grayson, *Lincolnshire Extensive Urban Survey: Boston* (Lincoln, 2019), summarises these key developments and plots the development of Boston over time.





Figure 106: Lidar image of Toft Haven, adjusted to show the latest, down-cut channels and Fishtoft glacial till island, which has evidence of Middle Saxon activity; the major banks in this area are also marked in orange (Underlying map source: OS Six Inch 1906, National Library of Scotland).

church, where they would dry their nets on the churchyard wall, in the period around or before 1700.<sup>451</sup> Certainly, a pair of significant down-cut creeks are visible here on Lidar, as well as the earlier major roddons discussed in Section 2, and Hallam was able to marshal evidence that showed that ‘Newlands’ were beginning to encroach on the haven here from the twelfth century.<sup>452</sup> Although there seem to be few references to Toft Haven, implying it was only ever of minor importance, the archaeological evidence points to significant activity in this area from the Middle Saxon (pre-Viking) era, whilst in the

early sixteenth century ships from Fishtoft were involved in the wool trade and in the late sixteenth century Fishtoft was one of the places in the county that the government wished to keep a particular eye on for the activities of pirates.<sup>453</sup>

Further north, the haven at Friskney similarly seems to have left a noticeable landscape impact (see fig. 88), but here there is even less documentary evidence, and it may have ceased to function fairly early in the medieval period. In contrast, Leake and Wrangle Havens—which may have shared a common mouth, looking at the landscape evidence—seem to have been somewhat more important. These havens probably had their origins in the early medieval creek systems and Late Saxon-to-Medieval salt-making industry of this area. Leake, which like Toft Haven was put under watch for pirates at the end of the sixteenth century, apparently had a lighthouse well inland of the current coastline at one point in the Early Modern period (perhaps located near the Ostrich Inn), whilst Wrangle Haven was very active indeed into the fourteenth century. Vessels from here are, for example, recorded as taking large amounts of Lincolnshire salt to the herring-fair at Yarmouth and then returning with significant quantities of herrings in 1340–43, and the port notably provided more vessels than Wainfleet to impressed royal fleets in 1337–9 and 1369, as well as vessels to carry sacks of wool in the Boston Wool Fleet of 1471.<sup>454</sup>

### C. Wainfleet Haven

Wainfleet is located on a major early medieval tidal inlet and in an area that saw considerable salt-making activity, the waste products of which created the ‘Tofts’ ridge that runs south-west from Wainfleet town to Wrangle, a landscape feature that has been calculated to consist of *c.* 96 million cubic metres of waste silt from the salt

<sup>451</sup> P. Thompson, *The History and Antiquities of Boston* (Boston, 1856), p. 478.

<sup>452</sup> H. E. Hallam, *Settlement and Society: A Study of the Early Agrarian History of South Lincolnshire* (Cambridge, 1965), pp. 80–5.

<sup>453</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 55, 122, 124.

<sup>454</sup> Hallam, *Settlement and Society*, p. 72; Pawley, *Lincolnshire Coastal Villages*, pp. 55, 89, 104–05, 115, 124.

industry, making it one of the largest human-made single features in medieval Britain.<sup>455</sup> The medieval town appears to have been founded in the twelfth century atop the higher ground of the saltern mounds created by the salt industry,<sup>456</sup> just at the point where the wide Schalflet creek joined Wainfleet Haven, and the earlier medieval harbour may be partly visible on Lidar to the west of the town (fig. 89). Wainfleet was, like Boston, extremely prosperous in the medieval period, ranking amongst the most important towns of contemporary Lincolnshire (for example, in 1334 it ranked between Sleaford and Louth) and exporting both salt and wool, as in 1378, when 204 sacks were sent to Boston for onward transport to Calais.<sup>457</sup> It was also one of only two places marked along the coastal zone between Grimsby and Boston on the fourteenth-century Gough Map, the earliest detailed map of Britain, the other being Saltfleet. However, Wainfleet's prosperity declined significantly after this, with the ships recorded from the port in the sixteenth century being much smaller than those that had served it in the medieval period, and by 1560 it was described as a 'pore beggarlie markt town wherein doeth inhabit no marchunt'<sup>458</sup>—the general problems with the decline in both wool exports and the local salt industry that caused issues more widely seem to have been made worse by the silting up of the main channel of the Haven, which caused Wainfleet to be located increasingly far from the sea.

#### D. The port of Old Skegness

Although now a significant coastal town, Skegness in the mid-eighteenth century was little more than a few buildings and a church. However, it had not always been like this—there had been 'a great haven town' here, several hundred metres out from the current coastline, but this had been destroyed by the sea during the early



Figure 107: Lincolnshire on the Gough Map of c. 1360; note, north is on the left in this image. The area from the Humber to the Witham has four coastal settlements mapped: Grimsby, Saltfleet, Wainfleet and Boston; the map also shows medieval road-routes and an intriguing district-name *Ageland*, which seems from this and other maps to apply to eastern Lincolnshire (Source: image © Bodleian Libraries, University of Oxford/[Wikimedia Commons](https://commons.wikimedia.org/wiki/File:Gough_Map_of_Britain_1360.jpg), PD).

<sup>455</sup> I. Simmons, 'The landscape development of the Tofts of south-east Lincolnshire 1100–1650', *Landscape History* 36 (2015) 9–24 at pp. 21–2.

<sup>456</sup> I. G. Simmons, 'Fen and sea: medieval and early modern landscape evolution in south-east Lincolnshire before 1700', *Landscapes* 18.1 (2017), 37–54, at p. 39; I. Simmons, *Fen and Sea: The Landscapes of South-East Lincolnshire AD 500–1700* (Oxford, 2022), p. 77.

<sup>457</sup> Simmons, *Fen and Sea*, p. 77.

<sup>458</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 132–3.

sixteenth century.<sup>459</sup> John Leland claims that this town had walls and a castle,<sup>460</sup> and it is now usually believed that it originated as a Roman defended ferry-port connecting Lincolnshire with Norfolk that was perhaps built on a sand body that had developed here on the coast.<sup>461</sup> Certainly, in the later twelfth century, it was described as ‘a good port’, unlike many of the others on the Lincolnshire coast, and the harbour—referred to several times in the local medieval court rolls and other documents—seems to have been sheltered by a protective line of dunes to the east of the town.<sup>462</sup> In the fourteenth century it was one of the main home ports of Lincolnshire’s fishermen, and in the fifteenth century it is recorded as importing wood and other goods from Scandinavia for the building of Tattershall Castle.<sup>463</sup> After its destruction in the early sixteenth century, there was an attempt to rebuild—the church was reconstructed inland at its current site, and a new haven seems to have been made close to the Ship Inn, although this is last recorded as functioning in 1702.<sup>464</sup>



Figure 108: The mouth of the Schalflet on the coast between Chapel St Leonards and Ingoldmells. The line of the creek here is nicely preserved by field boundaries and a bank to the south and Trunch Lane to the north; the creek itself is covered by late medieval ridge and furrow in the south and a caravan park in the north (Source: Google Earth image from 2006, Maps data © 2022 Google, Image © 2022 Getmapping plc Image Landsat/Copernicus).

## E. Ingoldmells and the port of Schalflet

The port of Schalflet (‘shallow estuary’) is placed north of that of Skegness in Roger of Howden’s twelfth-century account of the Lincolnshire coast, though it is not deemed ‘good’, unlike the latter.<sup>465</sup> The exact location of Schalflet is not made clear, but medieval references seem to associate it with a large area of Burgh-le-Marsh (Burgh Common), with an area located within ‘Orby meadows’, and with one of the common pastures of Croft

<sup>459</sup> A. E. B. Owen, ‘Coastal erosion in East Lincolnshire’, *Lincolnshire Historian*, 9 (1952), 330–41 at pp. 339–41; Pawley, *Lincolnshire Coastal Villages*, pp. 81–3

<sup>460</sup> John Leland, *The Itinerary of John Leland the Antiquary*, ed. T. Hearne (9 vols, Oxford, 1770), vol. 7, p. 152

<sup>461</sup> As suggested in Robinson, *Lincolnshire Seaside*, p. 17 (map). For the Roman ferry-port, see, for example, B. Whitwell, *Roman Lincolnshire* (Lincoln, 1992), pp. 51–3, and A. Owen and R. Coates, ‘Traiectus/Tric/Skegness: a Domesday name explained’, *Lincolnshire History and Archaeology* 38 (2003), 42–4.

<sup>462</sup> P. Hughes, ‘Roger of Howden’s sailing directions for the English coast’, *Historical Research* 85 (2012), 576–96 at p. 589.

<sup>463</sup> Kime, *Skegness*, p. 15; Pawley, *Lincolnshire Coastal Villages*, p. 80.

<sup>464</sup> Lincolnshire Archives MG/5/2/7 (receipts from 1698 and 1702 in the hand of William Massingberd); see further Section 2, above, and fig. 28.

<sup>465</sup> Hughes, ‘Roger of Howden’, p. 589.

parish. Burgh Common was a sinuous area of common land that lay atop the line of a massive, 300m-wide creek that once flowed from Wainfleet/Croft and Burgh-le-Marsh to the coast via Orby marsh, reaching the sea between Ingoldmells and Chapel St Leonards. As such, the sea-end of this creek is a credible candidate for the port of Schalflet.<sup>466</sup> Whatever the case may be, however, the wide inlet between Ingoldmells and Chapel was clearly of considerable significance—there is, for example, evidence for sea-banks maintained in the medieval period that lined its course and ran inland from the coast, and five parishes owned land around its outfall, two of them via detached portions (Orby and Hogsthorpe).<sup>467</sup> The inlet had probably at least partially silted up by the end of the medieval period, as can be seen by reclamation of some of its mouth as arable land, but it was still perhaps open to some degree. Whether this was also the creek known as ‘Ingoldmells Haven’, or ‘Thieves’ Creek’, in the later sixteenth century is open to debate, but it is not impossible, and Ingoldmells was certainly notorious for its pirates in that era,<sup>468</sup> although the haven largely disappears from the records after this.

## F. Wilgrip Haven (Theddlethorpe)

In 1378, Thomas Maryng of Louth was pardoned for having transported large quantities of wheat and beans to Scotland from three ports including ‘Wilgriphaven’ in 1374–5,<sup>469</sup> but this medieval harbour was clearly in existence much earlier than this. It is, for example, mentioned by Roger of Howden in the late twelfth century as an established port, and at some point before 1203 Philip of Kyme gave ‘the port of *Wolgrip* and all its liberties’ to the Gilbertine Priory of Bullington, Lincolnshire,<sup>470</sup> whilst Matthew Paris in the mid-thirteenth century included it on one of his maps of England, suggesting that it had considerable importance at that time.<sup>471</sup> Later references to the port include mention of its ships trading herrings in Skegness harbour in 1387 and the participation of its ships in the Boston Wool Fleets of 1466 and 1471, whilst in 1499 Bullington Priory received papal protection for its possessions and liberties, including those it had at the port of Wilgrip.<sup>472</sup> Wilgrip’s location has been variously given as ‘The Old Gout’/haven recorded between Theddlethorpe and Mablethorpe on the first edition of the OS map (around Crook Bank car park) or the outfall of Woldgrift Drain between Mablethorpe and Trusthorpe, the latter primarily due to its name.<sup>473</sup> Of the two, the former is significantly more plausible, not least because it seems to be related to the mouth of a large, early medieval estuarine river and creek system visible on Lidar flowing from Alford to Theddlethorpe, which—significantly—



Figure 109: Detail of eastern Lincolnshire from John Leland's sketch map of c. 1544, showing his attempt to sketch both Saltfleet Haven and the early Wainfleet Haven, including the latter's associated tributaries and lakes (Source: T. Sheppard, *The Lost Towns of the Yorkshire Coast* (London, 1912), p. 73/[Internet Archive](#)).

<sup>466</sup> See further the discussion in Section 2, above.

<sup>467</sup> Based on the parish boundaries recorded prior to reorganisation in this area, which saw the detached portions reassigned to Addlethorpe and Mumby Chapel/Chapel St Leonards, respectively.

<sup>468</sup> J. Roche (ed.), *Acts of the Privy Council of England: New Series, Vol. X, A.D. 1577–1578* (London, 1895), pp. 18–19, 141.

<sup>469</sup> A. E. B. Owen, ‘Wilgrip Haven and Theddlethorpe’, *Lincolnshire Historian* 2.3 (1955), 37–41 at p. 37.

<sup>470</sup> A. E. B. Owen (ed.), *The Medieval Lindsey Marsh: Select Documents* (Woodbridge, 1996), p. 76; A. E. B. Owen, ‘Two Lincolnshire coastal names’, *Journal of the English Place-Name Society* 31 (1998–9), 55–62 at p. 57.

<sup>471</sup> British Library, Cotton MS Julius D VII/1.

<sup>472</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 124–6; Owen, ‘Lincolnshire coastal names’, p. 57.

<sup>473</sup> Compare Owen, ‘Wilgrip Haven’, and Owen, ‘Lincolnshire coastal names’.

appears to have been diverted at some point into the present Woldgrift Drain. The last mentions of Wilgrip come in the eighteenth century, although these seem to be a copying from seventeenth-century references and only to refer to the name, not a functioning port. The final references to it as an actual port date from the later sixteenth century, as in 1565, when it was said to be in decay ‘& hath bene this xx<sup>ii</sup> years or thereabout’, but needed repairing because it took in fuel and victuals for the surrounding area.<sup>474</sup> However, it may well have continued to function after this as a purely local port under another name, perhaps slightly to the south of its original location on the main creek mouth (see fig. 48)—thus, the area of The Old Gout/Crook Bank is marked as ‘Theddlethorpe Haven’ on a map of 1759 and this was also where the original Theddlethorpe lifeboat was stationed prior to its relocation to Mablethorpe in the second half of the nineteenth century.<sup>475</sup>

## G. Saltfleet Haven or Saltfleethaven

Saltfleet Haven, in Skidbrooke With Saltfleet parish, was the most important port on the coast between Wainfleet and Grimsby and is mentioned repeatedly in medieval documentation, as well as being illustrated on the fourteenth-century Gough Map.<sup>476</sup> The current haven, constructed initially in the seventeenth century and remodelled extensively in the nineteenth century,<sup>477</sup> doesn’t reflect the larger medieval harbour that once existed here and which can still be seen on Lidar; this latter was originally formed through the conjunction of several large estuarine rivers and creek systems and was partially protected by a persistent sand body and dunes to its east.<sup>478</sup> The origins of Saltfleet lie in the Anglo-Scandinavian era, with the first reference to its existence being found in Domesday Book (1086), where the context indicates that there was already an established harbour capable of holding at least 24 ships here in 1066:

In Saltfleet Haven and in Mare and in Swine a new toll has been established, and Ansgar of Skidbrook has taken it, and Raynald and Humphrey and Geoffrey also; and the Wapentake of Louthesk says, and the whole South Riding also, that this toll did not exist T. R. E. [in the time of King Edward the Confessor, d. 1066] Godric gave a toll of 1 penny, according to the testimony of Ulchil of Asterby who saw it. Archil of Withern testifies that he saw Ansgar receive the toll in respect of 24 ships from Hastings.<sup>479</sup>

Indeed, in the thirteenth century the king appears to have tried to gain control of the harbour, claiming it was a ‘royal port’ in 1273, although he was rebuffed.<sup>480</sup> Trade from Saltfleet in the medieval period included grain, fish and wool, some of which was sent illegally to Scotland and the continent. As at Wainfleet, however, the clogging of the harbour with silt was a perennial problem that ultimately caused the haven to move away from the settlement; from the late medieval period onwards, such issues led to adjustments to the port and ultimately a decline in its importance, so that by the mid-sixteenth century both it and Wilgrip were described as being in

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<sup>474</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 131–2, 137. It is also mentioned by Holinshed in *c.* 1575: Owen, ‘Wilgrip Haven’, pp. 37–8.

<sup>475</sup> See S. Hill, *Theddlethorpe All Saints and Theddlethorpe Saint Helen’s Tithe Map* (1841), for the location of the lifeboat station, and Owen, ‘Wilgrip Haven’, p. 39, for The Old Gout being called ‘Theddlethorpe Haven’ in 1759. Note, however, that this site is likely to be distinct from the late sixteenth-century ‘Theddlethorpe Haven’, which was apparently a separate haven to Wilgrip and located to its north, so may have been at what was later known as ‘Balack Haven’ (fig. 45 and above): see Pawley, *Lincolnshire Coastal Villages*, pp. 61 (for it being north of Wilgrip) and p. 142, fn. 43 (for it being then a separate site to Wilgrip); see also the map in S. Pawley, ‘Maritime trade and fishing, 1500–1700’, in S. Bennett & N. Bennett (eds), *An Historical Atlas of Lincolnshire* (Hull, 1993), p. 59, which shows the late sixteenth-century Theddlethorpe Haven to the north of Wilgrip Haven.

<sup>476</sup> This is discussed at length in A. E. B. Owen, ‘The early history of Saltfleet Haven’, *Lincolnshire Architectural and Archaeological Society Reports and Papers* 5.2 (1954), 87–100, and Pawley, *Lincolnshire Coastal Villages*, *passim*.

<sup>477</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 315–6, Map A.2.

<sup>478</sup> See figures 49 and 50, above.

<sup>479</sup> C. W. Foster and T. Longley (trans. & eds), *The Lincolnshire Domesday and the Lindsey Survey* (Lincoln, 1924), p. 215.

<sup>480</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 13–14.

decay for twenty years and in need of repair.<sup>481</sup> The port of Saltfleet seems to have been briefly put in order again in the late sixteenth century, when it was also under watch for pirates, but it appears to have largely fallen out of use once more by 1600 in favour of a haven at Theddlethorpe that was located to the north of Wilgrip,<sup>482</sup> which was thereafter the normal place for landing goods on the coast here until the 1648 works at Saltfleet restored its fortunes to a degree.<sup>483</sup> The building of the sea-wall of 1648 finally cut off the original harbour from the sea, restricting it to the creek downstream of this with a new dock, and in the late seventeenth century Saltfleet could be described as ‘a small maritime town of little account, but of chief note for being a place frequented by the gentry in the sommer for the eating of fish’.<sup>484</sup> Subsequently, the town’s main fame was as a genteel bathing place until the growth of the saltmarsh brought this to an end in the mid-nineteenth century, although there did continue to be a dock here on the remains of the creek beyond the sea-bank into the eighteenth century and beyond.

## H. Mar (Somercotes), Swine (Grainthorpe), Northcotes and Tetney havens

Several havens and ports are mentioned between Saltfleet and Humberston, of which these four were the most significant. The first two are both mentioned in the eleventh century alongside Saltfleet Haven as ports already in existence in the time of Edward the Confessor (1042–66), and by 1190–1200 Mar was sufficiently ancient to be known as the ‘old haven’ (*Aldebauene*).<sup>485</sup> Mar Haven lay on a former branch of the Lud’s creek system and



Figure 110: Extract from Captain Andrew Armstrong’s *Map of Lincolnshire* (1779), showing the coast from Saltfleet to Tetney. Points of particular interest include the depiction of Saltfleet and its haven prior to its nineteenth-century straightening; the original course of the Lud (‘Old River’) with its three outfalls at Grainthorpe Haven (here marked as Grainthorpe Sluice), North Somercotes, and Saltfleet Haven; the extensive area of wetlands through which the eighteenth-century Louth Navigation was dug, which accord with the areas known as Sumerette, ‘Summer pasture’, in the medieval period; and what looks like a ‘Moot’ site (meeting-place) marked in the south of the latter (Source: © The British Library Board, British Library Maps K.Top.19.19.5 tab.end).

<sup>481</sup> Pawley, *Lincolnshire Coastal Villages*, p. 132.

<sup>482</sup> Probably Balack Haven, as noted above; it cannot be Wilgrip itself, as Theddlethorpe and Wilgrip havens are both recorded in certain of the Boston port-books at the end of the sixteenth century, with Theddlethorpe Haven apparently then lying to the north of Wilgrip Haven (Pawley, *Lincolnshire Coastal Villages*, pp. 61, 142 fn. 43).

<sup>483</sup> S. Pawley, ‘Maritime trade and fishing, 1500–1700’, in S. Bennett & N. Bennett (eds), *An Historical Atlas of Lincolnshire* (Hull, 1993), p. 59.

<sup>484</sup> C. Sturman, ‘“The great resort for sea bathing” – Saltfleet and the New Inn’, *Lincolnshire Past and Present* 12 (1993), 11–13 at p. 11.

<sup>485</sup> Owen, ‘Early history of Saltfleet’, p. 90.

on the parish boundary between Skidbrooke, North Somercotes and South Somercotes (cf. Schalflot), and traces of it, along with associated saltern mounds, can still be seen on Lidar. In the mid- to late thirteenth century, the port is said to have had tenements, buildings and shops,<sup>486</sup> and in 1279 Alan de Conisholme claimed ‘right of wreck’ at Mar Haven,<sup>487</sup> but it seems to have fallen out of use as a significant port sometime around the end of the thirteenth-century, perhaps partly due to the accumulations of salt-waste and the creation of new storm beaches and dunes along the coast during that era. Whether it ceased to function completely after this is unclear, as banks continued to outline its mouth/latest extent on the coast here, although by the sixteenth century there was almost certainly another haven in the area known as ‘Somercotes Haven’ or Southolle, which can probably be identified with the down-cut creeks running to the north of North Somercotes.<sup>488</sup>

Swine Haven is the ancestor of the modern-era Grainthorpe Haven and its name survives in Swine Dike. At first, in the eleventh century, it was probably located on a creek just seaward of the northern part of Grainthorpe village, but it was pushed further away over time by silting, salt-mounds and reclamations, with the modern Grainthorpe Haven at the coast being the latest iteration of it, dug in the late nineteenth century.<sup>489</sup> This was one of the more significant ports of the coast up to the fourteenth century—in 1337–9, for example, it provided 6 ships to the impressed royal fleet, only two less than Saltfleet and three times as many as Wainfleet, and in 1346 it provided a ship manned by 32 mariners, according to the Calais Roll. After this, it declined in importance somewhat, being absent from lists of the main fifteenth to early sixteenth century havens, although it was importing coal in the sixteenth century and is recorded as being under watch for piratical and smuggling activity in the latter part of that century, under its apparent alternative name of Northolle (‘Grainthorpe called the Northolle’).<sup>490</sup>

Northcotes Haven was originally the wide channel of an estuarine river and creek to the south of the village of North Cotes, into which the waters of Waithe Beck/Tetney Drain and the Old Fleet from North Thoresby ran, prior to the former being rerouted through Tetney Haven. This estuarine river was clearly of considerable antiquity and its continued importance into the medieval period can be seen by the substantial gap left for it in the wide plateau of saltern mounds between Tetney and Grainthorpe (see fig. 62). Although it is often thought to have been in notable decline since the thirteenth century, when it was recorded as having become silted up,<sup>491</sup> in the 1330s officials recorded 17 ships docked there, including vessels from Swinefleet, Selby, Owston Ferry, Wrangle, Saltfleet and Fulstowmarsh (Marshchapel), suggesting that it was still a substantial port at that point and involved in the local salt-making industry and trade, although the number of ships may have been inflated due to the temporary closure of Saltfleet Haven around that time. The port of Northcotes was clearly still functioning after this too, as in 1467–8 the manor of Calthorpe, Covenham, bought 100 salt-fish from here (around the same number it purchased from Grimsby), whilst vessels were recorded in Northcotes Haven in 1582 and 1601–12, and the creek was also under official watch for pirates in the late sixteenth century.<sup>492</sup> After this, it does seem to largely disappear from the records, however, and its wide, down-cut channel is clearly cut off by the 1638 sea-bank across the marshes here. Subsequently, the major port in this area was, of course, Tetney Haven, whose pre-canalisation course is clearly visible on Lidar. Prior to the eighteenth century, this seems to have only been a minor port and one rarely mentioned in medieval documents, but it was clearly possessed of at least some antiquity. In 1585, the creek at Tetney was under the eye of the customs men based

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<sup>486</sup> Owen, *Medieval Lindsey Marsh*, p. 107.

<sup>487</sup> Pawley, *Lincolnshire Coastal Villages*, p. 92.

<sup>488</sup> See fig. 55, above, and Pawley, *Lincolnshire Coastal Villages*, pp. 93–4.

<sup>489</sup> See above, Section 2 and fig. 59.

<sup>490</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 55, 61, 94, 104, 106, 131.

<sup>491</sup> D. N. Robinson, ‘Coastal evolution in north-east Lincolnshire’, *East Midlands Geographer* 5 (1970), 62–70 at p. 63.

<sup>492</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 111–4, 141, 165. Although Pawley suggests the large number of ships at Northcotes in the 1330s may have been in part due to Saltfleet Haven being closed for repairs, the fact that they were at Northcotes Haven at all remains a point of some significance.



Figure 111: Extract from a plan of the town, harbour and lordship of Great Grimsby, surveyed by W. Smith c. 1820, engraved by G. Parker in 1893, and published in the same year in A. Bates, *A Gossip About Old Grimsby*, showing the early nineteenth-century New Dock, the ‘Old Haven’, and the small size of Grimsby at the time, which was less populous than Louth until the second half of that century (Source: British Library digitised copy, [Flickr](#); Public Domain).

at Theddlethorpe, and there was a Shipdok around or inland of Tetney Lock in the late sixteenth century, whilst a name that appears to mean Tetney (*Teteneschale*) is mentioned as a port on the Lindsey coast by Roger of Howden in the late twelfth century, which is point of some significance.<sup>493</sup>

## I. Grimsby

Grimsby is the other main surviving port town and medieval borough of the Lincolnshire coastline, established beside what was originally an ancient marine creek in the saltmarshes by the River Humber. Unlike Boston and the other ports mentioned here, it was at least partly rooted on a firm glacial clay promontory, rather than solely atop the marine sediments (processed or otherwise) of the Outmarsh and Fens. In terms of the origins of the town, this is traditionally ascribed to the Viking era given the town’s name, its appearance in the medieval tale of *Havelok the Dane*, and a reference to a Norwegian merchant ship docked there in 1069.<sup>494</sup> However, there are indications that there was some sort of significant pre-Viking activity in the local area, including a major Anglo-Saxon road (*berrepath*) that seems to cross Lincolnshire from Gainsborough to Grimsby and the probably Anglo-Saxon/Viking-era coastal lookout hill and fort just to its west at Toote Hill, Little Coates.<sup>495</sup> As to its trading activity, Grimsby seems never to have rivalled Boston, which was a port of national and international importance; nonetheless, it did have local and even regional significance and Scandinavian connections—indeed, Grimsby is one of only three coastal ports north of the Thames mapped and mentioned by the great Islamic scholar al-Idrīsī in about 1154, suggesting that it had some considerable significance at that point.<sup>496</sup> Like Boston and other Lincolnshire ports, Grimsby saw a marked degree of decline from the later medieval period. By 1490, the haven was said to be ‘wrecked and stopped’, *i.e.* silted up, and its fall was such that more fish was being landed at inland Louth, via its canal, than was at Grimsby in the late eighteenth century.<sup>497</sup> This reduced status was only

<sup>493</sup> J. Thirsk, *English Peasant Farming: The Agrarian History of Lincolnshire from Tudor to Recent Times* (London, 1957), p. 63; Pawley, *Lincolnshire Coastal Villages*, pp. 94–5; Hughes, ‘Roger of Howden’, p. 589.

<sup>494</sup> For example, S. H. Rigby, *Medieval Grimsby: Growth and Decline* (Hull, 1993), pp. 3–7; E. Gillett, *A History of Grimsby* (Oxford, 1970), pp. 6–8

<sup>495</sup> See fig. 76 for the latter and B. Cox, ‘The pattern of Old English *burh* in early Lindsey’, *Anglo-Saxon England* 23 (1994), 35–56 at pp. 36 (map), 42–3, for the former.

<sup>496</sup> Green, ‘Al-Idrīsī’s twelfth-century description and map of Lincolnshire’

<sup>497</sup> D. N. Robinson, *The Book of Louth: The Story of a Market Town* (Buckingham, 1979), p. 137.



combated by attempts to restore the harbour from the start of the nineteenth century, culminating in the construction of new docks in the mid-nineteenth century and a renewed importance for the town that saw it become one of the fastest-growing towns in the country.



Figure 112: The new main street for Skegness, Lumley Road, that was laid out in the later nineteenth century, here in a picture from the 1890s. The original main street from 'Roman Bank' to the sea sat atop a medieval sea-bank and is now the High Street (Source: Detroit Publishing Co. no. 11326; [Library of Congress](#), PD).

## Bathing inns, railways and new towns

If Boston and Grimsby found new life during the eighteenth and nineteenth centuries, they were not alone. This period also saw the seeds of a number of new coastal towns planted along the coast. The origin of modern Skegness, Cleethorpes and Mablethorpe/Sutton-on-Sea all can be found in the later eighteenth century, when they became home to fashionable Georgian sea-bathing inns and hotels. The initial inns were established at places that were little more than hamlets previously, but the early to mid-nineteenth century saw them acting as the core around which new resorts grew. At Cleethorpes, for example, the Dolphin Inn/Cleethorpes Hotel was joined by only 2 or 3 lodging-houses in 1803 in providing services for those wealthy visitors wishing to stay there, but by the middle of the century there were two further bathing inns and 106 lodging-houses, with 1,300 visitors at a time in the 1850s. Likewise, Skegness was a very small hamlet before about 1770, its original town and harbour having been lost over two centuries earlier, but it saw notable growth in the late eighteenth and especially the nineteenth centuries after the founding of two bathing hotels (the Vine and Hildred's). Mablethorpe followed a similar pattern, with a fashionable bathing inn—the Book in Hand—forming a core around which a small resort grew by the mid-nineteenth century, with over 120 visitors resident in July 1855 and 4,000 'pleasure-seekers' descending on the place in a single day in August 1871.<sup>498</sup>

<sup>498</sup> On all of this see, for example, R. Neller, 'Skegness, Mablethorpe and Cleethorpes: contrasts of land ownership and investment in the development of seaside resorts', *Lincolnshire History and Archaeology* 47 (2012), 35–47; Robinson,

These three places were not the only sites in Lincolnshire where such bathing inns were established—others were founded on the Witham channel below Boston, at Freiston Shore, and at Saltfleet. These places, however, never progressed to become towns. River-bathing, as practiced at Skirbeck and Boston Scalp/Fishtoft, proved to be substantially less popular than beach-bathing, whilst the bathing inns at Freiston Shore (the Coach & Horses/Plummers and the Marine, the former built in the early eighteenth century and the latter just after the middle of the eighteenth century)<sup>499</sup> and Saltfleet (the New Inn, which has seventeenth or even sixteenth-century roots)<sup>500</sup> suffered because of saltmarsh growth between the inns and the sea, which made them less attractive as the nineteenth century wore on. The major factor that allowed Skegness, Mablethorpe and Cleethorpes to grow into true towns was, however, the connection of these places to the railway networks of the nineteenth century, although this was arguably influenced by the proven and continuing popularity of those places with bathers and tourists. Cleethorpes got its branch line first in 1863, and 30,000 people subsequently arrived by train on a single day in that year, along with another 10,000 who arrived via the roads; by the end of the nineteenth century, it was home to nearly 40,000 people. Skegness gained its railway in 1873, and on the August bank holiday of that year 10,000 trippers arrived in the town. The increased popularity of Skegness due to the railway led to the creation of a new planned town and ‘health resort’ here from the late 1870s, with wide roads and pavements, although the northern part of the plan was never followed through. Mablethorpe was last to benefit, gaining a railway in 1877. While it too saw a major surge in development, notably between the station and the beach, it grew significantly more slowly than the other two ‘new towns’ and was never as popular—although it gained urban status in the 1890s and was significant as a local population and resort centre, it still had less than 1,000 permanent inhabitants by 1901, and only merged with Trusthorpe and Sutton in 1925.<sup>501</sup>



Figure 113: Notice for F. Henry's Excursions by the Manchester, Sheffield & Lincolnshire Railway Company to the Lincolnshire resorts, 1880s (Source: Science Museum Group Collection © The Board of Trustees of the Science Museum, released under a CC BY-NC-SA 4.0 licence).

*Lincolnshire Seaside*, pp. 54–9, 63–7, 84–5; A. Dowling, *Cleethorpes: The Creation of a Seaside Resort* (Chichester, 2005). The foundation dates for the Vine, Hildred's and the Book in Hand are discussed briefly in Section 2.

<sup>499</sup> Lincolnshire HER MLI88792 and MLI88793; Robinson, *Lincolnshire Seaside*, p. 54.

<sup>500</sup> Sturman, 'Saltfleet and the New Inn'; Pawley, *Lincolnshire Coastal Villages*, p. 238.

<sup>501</sup> On the importance of the railways to the resorts of the Lincolnshire coastline, see, for example, R. Neller, 'Skegness, a history of railway excursions', *Lincolnshire History and Archaeology* 46 (2011), 11–27; Neller, 'Skegness, Mablethorpe and Cleethorpes'; and R. E. Pearson, 'Railways in relation to resort development in east Lincolnshire', *East Midland Geographer* 4 (1968), 281–95.



Figure 114: (a) Harry Teggins' vision of a 'Great Wash City' to be built actually in the Wash; (b) Woldsea, as envisaged in its prospectus (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

## Towns that never came to pass

In addition to the 'new towns' that did get built, there were also plans for coastal towns that never came to fruition. One of the earliest of these was focused on Sutton-on-Sea, where a proposal to build a large, 10-acre fish dock got so far as obtaining an Act of Parliament to allow for its construction.<sup>502</sup> Even more transformative would have been Harry Teggins' scheme for the construction of a massive 'Great Wash City' of 750,000 people to the south of Skegness from 1966. This would have been built partly on the marshes and partly in the Wash itself, providing a huge new deep-water port, vast new areas of reclaimed lands, and enormous fresh-water reservoirs, at the cost of the entire Wash coastal zone from Skegness to Hunstanton and beyond in Norfolk. Although none of these elements were considered to be individually viable, Teggins maintained that the cumulative economic and social benefits of constructing all of them together meant that the scheme was workable, desirable and cost-effective. Indeed, it was argued that, not only would the scheme bring major economic development to an area of England that was underdeveloped, underpopulated, and unexploited, whilst relieving pressure on London and the south-east, but that it would also ensure effective flood control, improved navigation, and the creation of some of the richest agricultural land in England. Needless to say, the impact on Lincolnshire if Teggins' scheme had gone ahead would have been dramatic, and not simply from an economic standpoint: at a stroke, the county would have lost half its seaboard, along with all the wildlife that currently frequents it.<sup>503</sup>

Perhaps more plausible were the plans for a new 1,135 acre 'garden city' on the coast to be built at Huttoft Bank, which were published in 1911 by the Woldsea Freehold Town Planning Syndicate Ltd under the title of *Woldsea—The First Garden City by the Sea*. Issued as both a prospectus and newspaper summaries in *The Times* and elsewhere, it offered a plan to develop a new 'garden city' for the upper and 'better middle' classes on a

<sup>502</sup> Pearson, 'Railways', pp. 287–90.

<sup>503</sup> H. Teggins, 'City on the Wash', *The Listener*, 26 May 1966, pp. 751–3; H. Teggins, 'Britain's Europort: the real treasure in the Wash', *The Architects' Journal*, 15 January 1969, pp. 142–98; Robinson, *Lincolnshire Seaside*, pp. 142–3.

largely unexploited expanse of the Lincolnshire coastline around Huttoft Bank, just to the south of Mablethorpe, Sutton-on-Sea and Sandilands, an area now partially occupied by the National Trust Sandilands site.<sup>504</sup> The town, also advertised as ‘Woldsea, the Eastern Riviera’,<sup>505</sup> was to have a two-mile sea frontage with ‘magnificent sands’, its own railway station (on the Great Northern Railway, which ran close to the site), and a town entrance in the form of a pseudo-medieval gateway. The sandhills along the shoreline were to be planted with flowering shrubs and trees to enhance their charm, the existing golf course behind the dunes—which was proposed in 1894 and opened in 1904<sup>506</sup>—was to be supplemented by a large ‘Pleasure Gardens’ with a band stand and cricket ground, and the ‘garden city’ townscape inland of these was to be filled with Mock Tudor hotels, houses, bungalows and villas, suggestive of a sort of Woodhall Spa-by-the-Sea. The scheme failed to come to fruition, however, perhaps because it was launched so close to the start of World War One, and by the early 1930s the land obtained for it was apparently being sold off in parcels.<sup>507</sup> The golf course and Grange and Links hotel at Sandilands were amongst the only tangible remains of the scheme, and both have recently been lost, leaving as the only remnant the name of an isolated farmstead in Huttoft parish, Wold Sea Farm.



Figure 115: The beach today at Huttoft Bank, which would have lain at the centre of the Woldsea seafront if the project had reached fruition. In *Country Life*, 20 May 1911, p. 17, Woldsea was described as ‘the FIRST GARDEN CITY BY THE SEA, which it is proposed to rapidly create in Tennyson’s Country in the neighbourhood of the beautiful Lincolnshire Wolds. The site, which has a frontage of some two miles of firm expansive sands, has been chosen for its geographical position, on the East Coast, easily accessible to the large mid-England population.’

<sup>504</sup> ‘Woldsea—the first garden city by the sea’, *The Times*, 17 July 1911, p. 19; Robinson, *Lincolnshire Seaside*, pp. 85–6.

<sup>505</sup> *Skegness Standard*, 29 July 1936, p. 8.

<sup>506</sup> *Stamford Mercury*, 11 May 1894, p. 5; *Stamford Mercury*, 27 May 1904, p. 2.

<sup>507</sup> For example, *Lincolnshire Echo*, 25 June 1932, p. 2, and *Lincolnshire Echo*, 5 August 1933, p. 2; see *Skegness News*, 26 December 1934, p. 7, for the winding-up of companies related to the Woldsea scheme.

## 3 The Drowned Settlements of the Lincolnshire Coastline

### Introduction

Up until the thirteenth century, the coast of Lincolnshire was protected by a series of offshore coastal barrier islands that were once low hills on the plain of Doggerland until the latter flooded 9,000 years ago to become the North Sea (fig. 92).<sup>508</sup> These islands created a sheltered tidal lagoon between themselves and the main coastline, but this protection appears to have failed during the 1200s, as the offshore islands were finally destroyed by a series of storms and floods in that century. With the foreshore no longer protected, the sea began to make significant inroads into the land here, reclaiming a mile or more from the coast between Mablethorpe and Skegness by the end of the sixteenth century and destroying a number of low-lying coastal settlements in the process.<sup>509</sup>

### Mablethorpe St Peter

The storm surges of 1286 and 1288 are often considered to be the events that finally overwhelmed the offshore barrier islands, and they seem to have caused significant damage to the Lincolnshire coast too, particularly in the neighbouring medieval parishes of Mablethorpe St Peter, now lost, and Mablethorpe St Mary. The church of Mablethorpe St Peter lay offshore to the north-east of the main Mablethorpe pullover (around a mile to the north-east of the current Mablethorpe St Mary's church), and the *Louth Park Abbey Chronicle* and the *Hagnaby Abbey Chronicle* relate that the church of Mablethorpe St Peter was 'rent asunder by the waves of the sea' and 'entirely destroyed' in storms during these years. The Hagnaby chronicle goes on to tell us that, on 4 February 1288, there was

a flood of the sea ... [that] reached as far as Maltby field and it totally destroyed the church of St. Peter of Mablethorpe, and that day many men, uncounted sheep and an unknown number of cattle perished... Also on the eve of the Assumption of the Virgin Mary [14 August 1288] the sea did very great damage in Mablethorpe.<sup>510</sup>

Despite its obviously vulnerable coastal position, the rebuilding of Mablethorpe St Peter's church appears to have been begun a short time after these floods and on the same site, with money from the local tithes and offerings assigned to this from May 1290. Whether the church of Mablethorpe St Mary was also damaged in these floods is unrecorded, although it may be significant that it too was being rebuilt in the early 1300s; in this case, however, the rebuilding took place well inland, on a new site where the church currently stands. This was clearly the more sensible course, as the marine flooding continued at intervals. In August 1335, the sea broke through the banks again and drowned sheep and crops in a flood that lasted two days; in March 1425, 'the sea banks at Mablethorpe were shattered by the tide and most of the township was drowned', something that recurred later in the year too, when 'almost the whole township of Mablethorpe was drowned'; and in 1443, the lord of the manor of Mablethorpe, Thomas Fitzwilliam, was exempted from various duties 'in consideration of his loss of land at Malberthorp through the irruption of the sea' and the cost of repairing the defences.<sup>511</sup> This continued into the sixteenth century, when the Commissioners of Sewers for the province of Lindsey indicated in 1500 that both Mablethorpe and Skegness were 'in very great danger of the sea', and the truth of this judgement was demonstrated in the late 1530s, when the church of St Peter, the village of 'Mawplethrop', and

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<sup>508</sup> Discussed above, Section 2 and Section 3.1; see, for example, Pye *et al*, *Sand dune processes*, p. 8.

<sup>509</sup> See the discussions in Robinson, *Lincolnshire Seaside*, pp. 13, 17 (map), 19–22; Pawley, *Lincolnshire Coastal Villages*, pp. 69–70, 73–84.

<sup>510</sup> Owen, *Medieval Lindsey Marsh*, pp. 72–3; A. E. B. Owen, 'Mablethorpe St Peter and the sea', *Lincolnshire History and Archaeology* 21 (1986), 61–2.

<sup>511</sup> R. C. Fowler, *Calendar of the Patent Rolls: Henry VI, vol. IV, A.D. 1441–1446* (London, 1908), p. 174; Owen, 'Mablethorpe St Peter', p. 61; Owen, *Medieval Lindsey Marsh*, p. 73.



Figure 116: The Pier, Skegness, as it appeared in the 1890s; the original settlement of Old Skegness is believed to have been located out to sea from the original end of the pier (Source: Detroit Publishing Co. no. 10825; Library of Congress [LOT 13415, no. 852](#), PD).

the greater part of its parish were ‘overflowed with water in the sea’ and never recovered. As late as the 1870s, the church ruins could still be seen from the dune-top and finds from Mablethorpe St Peter occasionally turn up on the beach here.<sup>512</sup>

## Old Skegness

A similar calamity befell ‘Old Skegness’ in the early sixteenth century. As noted above, this was probably originally a Roman defended ferry-port of some significance, and the medieval port of Skegness was located on a creek at the western entrance to the Wash, where it was sheltered by a ‘ness’ or promontory of dunes and beaches running south from the Winthorpe and Ingoldmells shore (fig. 27). In 1500, Skegness was said to be ‘in very great danger of the sea’, and in or about 1526 the town was finally taken by the sea, a contemporary ecclesiastical subsidy recording that the ‘church and a great part of the parish was submerged’.<sup>513</sup> By 1540, the town seems to have been entirely swallowed up by the waves, with the Skegness lands of an estate purchased for £360 in 1517 being recorded in 1800 as having been ‘for two centuries or more known only by the description of “Terra aqua submersa.”’<sup>514</sup> However, ‘manifest tokens of old buildings’, including the church, were said to still be visible at low tide in the mid- to late sixteenth century, located around half a mile or so out to sea—for example, Edward Williamson of Winthorpe, aged 76, reported to an exchequer inquisition of 1637–8 that he

<sup>512</sup> Robinson, *Lincolnshire Seaside*, pp. 20–1; Owen, ‘Mablethorpe St. Peter’, pp. 61–2; W. A. B. Jones, ‘Mablethorpe’, *The Lincolnshire Magazine* (Lincoln, 1932–4), vol. 1, pp. 203–06 at p. 204; Pawley, *Lincolnshire Coastal Villages*, p. 83.

<sup>513</sup> Owen, ‘Coastal erosion’, pp. 339 – 41; Pawley, *Lincolnshire Coastal Villages*, pp. 80–3.

<sup>514</sup> R. Churton, *The Lives of William Smyth Bishop of Lincoln and Sir Richard Sutton Knight* (Oxford, 1800), pp. 379, 381.

himself could testify to the losses of land at Skegness, 'haueing beene in the foundacon of ye same church in his youth and haue seene the funt that stood therein'.<sup>515</sup>

A new settlement and church at Skegness were subsequently constructed further inland, but this was considered but 'a poor new thing' and 'New Skegness' remained little more than a hamlet until the eighteenth century. The losses, however, continued to pile up—according to the rector of Skegness in 1629, there had been further erosion in the reign of Elizabeth I that was followed by a partial reclamation, but 'since the year 1616, 140 acres of these late recovered grounds were again surrounded and lost unto the sea irrevocably'.<sup>516</sup> In 1639, further losses were recorded, including the erosion of part of the sandhills to the south of Skegness eight years previously, and whilst Lord Castleton recovered some of the lost lands seawards of 'Roman Bank' in around 1670 with the construction of the 'Green Bank', the sea continued to claim land in this area. So, in January 1731, it was recorded that 'the sea has broke Skegness sea bank', washing away many of the rabbits in the warren there,<sup>517</sup> whilst in February 1735 a 'boisterous wind' caused the overflow of the sea-banks and the flooding of the land 'this side of Dydick Bank', drowning of 500 acres in Winthorpe.<sup>518</sup> Likewise, in 1837 there was an exceptional high tide that is commemorated by a mark around 2.7 metres up the tower of Winthorpe Church (which is situated on land at about 2.5–3m OD), indicating widespread flooding in that year, and the Scabbed Lamb and former Ship Inn—later known as Frow's New Bathing Inn, Marine Villa, and then the White House—in Ingoldmells were both washed away by the sea in the 1860s and the 1910s–20s, respectively.<sup>519</sup>



Figure 117: One possible reconstruction of the drowned coastline and settlements of Lincolnshire. Robinson's suggested late medieval to sixteenth-century coastline is in orange and set against the modern coastline (green); note, the 'new lands' to the south of Skegness were created via reclamations from the mid-sixteenth century.

## Sutton on Sea and Trusthorpe

Skegness and Mablethorpe St Peter were not alone in this destruction. Not only were two hamlets within Skegness parish, called East and West Meales, also taken by the sea in the early sixteenth century, but Sutton-in-the-Marsh (modern Sutton-on-Sea) clearly suffered a parallel fate. Its church is recorded in 1398–1409 as having

<sup>515</sup> Quoted in Pawley, *Lincolnshire Coastal Villages*, p. 82.

<sup>516</sup> *Royal Commission on Coast Erosion – Minutes of Evidence and Appendices thereto accompanying the First Report of the Royal Commission* (London, 1907), vol. 1, part 1, Appendices, pp. 327–8. On the sixteenth century losses, see, for example, Owen, 'The upkeep of the Lindsey sea-defences, 1550–1650', *Lincolnshire Historian* 2.10 (1963), 23–30 at pp. 23–4, and Owen, 'Coastal erosion', pp. 340–1.

<sup>517</sup> Lincolnshire Archives 1-MM/7/1/C.

<sup>518</sup> E. Oldfield, *A Topographical and Historical Account of Wainfleet and the Wapentake of Candleshoe, in the County of Lincoln* (London, 1829), p. 366; Kime, *Skegness*, p. 85.

<sup>519</sup> Kime, *Skegness*, pp. 22, 85; S. Hallgarth, 'The White House, Ingoldmells' (1979, article offprint); Robinson, *Lincolnshire Seaside*, p. 57 (who wrongly places it at Vickers Point). Note, the various accounts of both the White House and Frow's New Bathing Inn, along with relevant alehouse records, census records and newspaper reports, suggest that that the Ship Inn—run by John Ulliott in 1811 and 1812—became Thomas Frow's New Bathing Inn, aka The Castle, from 1813, and then Marine Villa (marked on the coast on the OS Six Inch maps), before finally becoming known as the White House prior to its destruction by the sea from 1911–22.

been ‘since destroyed by the sea’,<sup>520</sup> and the replacement church seems to have been itself consumed by the tides in the 1550s according to a petition submitted to the Privy Council in 1637, which notes that, around fourscore years previously, ‘our ancient parish church, some houses inhabited, and very much of the best grounds in our said town was destroyed by the sea and now is sea’.<sup>521</sup> Needless to say, within a century little remained to be seen of the destroyed ‘ancient parish church’ or the ‘houses inhabited’ of Sutton, which supposedly lay atop the ‘clay huts’ (submerged forest exposures) that De Serra encountered stretching out for a mile from the coast here in 1796:

The people of the country believe, that their parish church once stood on the spot where the islets now are, and was submerged by the inroads of the sea; that, at very low water, their ancestors could even discern its ruins; that their present church was built to supply the place of that which the waves washed away; and that even their present clock belonged to the old church. So many concomitant though weak testimonies, incline me to believe their report, and to suppose that some of the stormy inundations of the North sea, which in these last centuries have washed away such large tracts of land on its shores, took away a soil resting on clay, and at last uncovered the trees which are the subject of this Paper.<sup>522</sup>

Whatever the case may be on this, as at Skegness it would seem that a new church was constructed well inland from that which had been lost, although the cost of defending the remaining parts of Sutton parish from the sea meant that the settlement remained significantly impoverished through the Early Modern era—the new Sutton church was, for example, described as ‘a most wretched church of stud and clay with a wooden ruinous steeple’ in the eighteenth century, and was replaced by the current edifice in turn in 1818–19.<sup>523</sup> As to Trusthorpe, just to the north of Sutton, the evidence is less solid, but points in much the same direction—Thomas Allen, writing in 1834, says that the ‘original church of Trusthorpe is traditionally reported to have stood a quarter of a mile eastward from what is now the sea coast, and to have been destroyed by the encroachment of the sea’, a suggestion that seems inherently likely given the histories of the surrounding churches of Mablethorpe and Sutton.<sup>524</sup>



Figure 118: A fifteenth-century painting of the 1421 Saint Elizabeth's Day Flood in Holland, showing the breaking of the dike—much of Holland was flooded, with the Dordrecht region seeing 23 villages submerged and 2,000 people dead (Source: Rijksmuseum Amsterdam [SK-A-3147-B](#), Public Domain)

<sup>520</sup> Owen, *Medieval Lindsey Marsh*, pp. 115–6.

<sup>521</sup> Owen, ‘Coastal erosion’, p. 334.

<sup>522</sup> De Serra, ‘Submarine forest’, p. 156.

<sup>523</sup> Listed Building 1062981; Lincolnshire HER MLI92913. The current church includes some re-used medieval stone and a medieval font, both perhaps from the first or second church here.

<sup>524</sup> T. Allen, *The History of the County of Lincoln*, 2 vols. (London & Lincoln, 1834), vol. 2, p. 162.



## Chapel St Leonards

Perhaps the most dramatic account of a Lincolnshire coastal village being destroyed by the sea comes from the former Mumby Chapel, modern Chapel St Leonards. In 1570, a terrible storm appears to have almost completely levelled the settlement here, as Holinshed related in his contemporary *Chronicles*, saying that ‘the whole town was lost, except three houses... Likewise, the church was wholly overthrown except the steeple... Master Pelham lost eleven hundred sheep at Mumby Chapel’.<sup>525</sup> According to later sources, through ‘the encroachments of the sea, and the spoliations of the 16th century, this chapel lost the whole of its property’, and the map of Lincolnshire in the *Mariners Mirror* of 1588 clearly shows ‘Nomby chaple’ as situated in the sea itself.<sup>526</sup> The chapel was apparently subsequently rebuilt, but was allowed to fall into ruin by 1750 and had to be rebuilt again in 1794.



Figure 119: Armstrong's 1779 map of the Lincolnshire coastline, showing a recent breach at Sutton-on-Sea (Source: © The British Library Board, British Library Maps K.Top.19.19.5 tab.end).

## Later flooding and erosion

Although the most dramatic losses seem to have been over by the end of the sixteenth century, flooding and erosion continued all along the coast from Mablethorpe to Skegness for some considerable period of time, not just in the Skegness area. In 1645, for example, the inhabitants of Mablethorpe, Withern-cum-Stain, Strubby-cum-Woodthorpe and Maltby were all exempted from a tax for coastal defence ‘in respect of their great loss lately sustained by the inundation of the Sea’, whilst in 1696 it was reported to the Royal Society that ‘at *Mamplethorp*, they are often in danger of being Drowned, their defence being only Banks or Hills of a small Sand, called *Meals*, the former Church having been devoured by it’.<sup>527</sup> Likewise, in 1631 the bank at Sutton was reported to be ‘very much ruinated and a great part of it... swept away by the violence and rage of the sea’. Indeed, before a new bank was finally constructed in 1641, the sea was apparently coming over the top of the old Sutton bank with every spring tide.<sup>528</sup> Captain Armstrong's 1779 *Map of Lincolnshire* also shows ongoing problems in this area, with a large gap in the coastline annotated with the comment that ‘The Sea made a great Breach of the Banks at Sutton in 1777’, something perhaps confirmed by the loss of eight acres of glebe land here that was reported in 1789.<sup>529</sup> Such depredations continued through the nineteenth and twentieth centuries, with Sutton and Trusthorpe requiring new defensive works after an exceptional high tide in 1883, Sandilands having its sea-

<sup>525</sup> R. Holinshed, *Chronicles of England, Scotland and Ireland*, 6 vols. (1577, ed. London, 1808), vol. 4, pp. 254–6 (with modernised spelling); see A. E. B. Owen, ‘Chapel St Leonards and the flood of 5 October 1570’, in C. Sturman (ed.), *Lincolnshire People and Places: Essays in Memory of Terence R. Leach* (Lincoln, 1996), pp. 87–90.

<sup>526</sup> *White's History, Gazetteer & Directory of Lincolnshire*, 1872, p. 265; A. Ashley, *The Mariners Mirror* (1588), p. 136, an English translation by Anthony Ashley of the Dutch *Spiegel der Zeevaerdt* by Lucas Janszoon Wagenaer.

<sup>527</sup> Merret, ‘Several observables in Lincolnshire’, pp. 348–9.

<sup>528</sup> C. H. Firth and R. S. Rait (eds), *Acts and Ordinances of the Interregnum, 1642–1660* (London, 1911), pp. 662–4; Owen, ‘Coastal erosion’, p. 334. For the history of the new bank here, see also Owen, ‘Upkeep’, p. 27.

<sup>529</sup> Owen, ‘Coastal erosion’, pp. 334–5.



Figure 120: Before and After Kingsway was built at Cleethorpes, from an early twentieth-century postcard, showing the low cliff being eroded towards the houses here.

defences broken with breaches in the dunes in 1947, and, of course, the events of 1953, which saw almost the whole Outmarsh inland of Mablethorpe to Chapel Point flooded by the sea (fig. 146).<sup>530</sup>

Elsewhere, there were issues too. At Cleethorpes, De la Pryme in 1697 observed the sea washing away the cliffs, with huge pieces ‘undermined and brought down every great tide as bigg as whole churches together’, and reported the local tradition that the villagers had lost ‘several miles of land’ to the sea.<sup>531</sup> The erosion here was only halted in the late nineteenth century through the erection of the sea-wall and promenade, and this had to be extended southwards to form the Kingsway in the early twentieth century, when further erosion saw the road running along the top of the cliff disappearing in cliff falls and the houses on the front being under severe threat.<sup>532</sup> At Anderby, one resident in 1778 remembered the sea coming up to the parsonage here, despite it being 3km inland (suggesting a similar flood event to 1953), although such floods were probably relatively rare in this area, which seems to have not really suffered from significant erosion and still retains its medieval sea-bank, unlike the areas

to the north of Sandilands and to the south of Chapel Point. In the latter area, flooding seems to have continued to be a regular feature of life, just as it was around Mablethorpe. In addition to the floods mentioned already at Skegness and Winthorpe, the area between Mumby Chapel and Ingoldmells saw a bank named the ‘Hogsthorpe Jackfish Bank’—which joined the Ingoldmells Bank to Chapel’s Bell Bank—being ‘lacerated, ruined and torn’ in 1637, so that the land behind it was flooded; large areas of Addlethorpe and Ingoldmells remaining under water for three weeks in 1735 after the failure of around a mile of sea-bank; and 500 yards of sandhills at Ingoldmells being destroyed by the sea in 1877.<sup>533</sup> Such continued flooding and erosion had clear landscape impacts even into the modern era—for example, the original Ingoldmells Point seems to have been eroded away since the early nineteenth century and the name transferred to the outfall 200m further north than the original, whilst the 1953 floods that inundated 20,000 acres along the Lincolnshire coastline led to the building of large-scale sea-defences all along the coastline.

<sup>530</sup> F. A. Barnes and C. A. M. King, ‘The Lincolnshire coastline and the 1953 storm flood’, *Geography* 38.3 (1953), 141–60; Robinson, *Lincolnshire Seaside*, pp. 125–37.

<sup>531</sup> A. De la Pryme, *The Diary of Abraham De La Pryme, the Yorkshire Antiquary* (Durham, 1870), p. 155

<sup>532</sup> Neller, ‘Skegness, Mablethorpe and Cleethorpes’, p. 46.

<sup>533</sup> Owen, ‘Coastal erosion’, pp. 336–7; Barnes and King, ‘1953 storm flood’, p. 145. The flooded land of 1637 was known as ‘Out End Dyke grounds’ and was presumably in the mouth of the former Schalflet creek or thereabouts, given the description of the area.

## 4 The Lost Islands of the Lincolnshire Marsh and Coast

### Introduction

As the main body of this study demonstrates, the Lincolnshire coastal zone, as it exists today, is only a few centuries old; previously, there was a wide expanse of coastal marshes and wetlands here, stretching up to a mile seaward of the present beaches and to up to 10km inland of them. Human activity in this wetland landscape was often drawn to any slight rise in the landscape. Some of these rises were natural islands formed at the end of the last Ice Age, as marine flooding from around 6000 BC gradually drowned the gently rolling land here, leaving only the tops of the small hills protruding as islands. Others were sandbanks, dunes, former river channels, or earlier coastlines, where natural processes built up a slight rise compared to the surrounding marsh. And yet others were created, usually accidentally, by human activity, especially salt-making.

### The offshore barrier islands

Perhaps the most important islands of the Lincolnshire coast were a band of offshore islands that protected the coast from erosion and allowed the wide saltmarshes and creek systems to develop. Formed from the slightly higher ground that once lay to the east and north of the modern Lincolnshire and Norfolk coastlines, they were probably originally part of a glacial deposit left by the retreating ice-sheets on what was then the land surface. These islands extended south-eastwards from Spurn Point and are believed to have shielded the Lincolnshire seaboard from the full ferocity of the storms and tides of the North Sea, creating a sheltered tidal lagoon between themselves and the main coastline. This protection appears to have finally failed during or from the late 1200s, when the offshore islands were destroyed by storms and floods: the debris that resulted from their destruction is usually thought to have been cast up along the foreshore of the Lincolnshire Outmarsh as broad ‘storm beaches’ and sand dunes, as at North Somercotes.<sup>534</sup>

### The clay islands of the medieval marsh

As the Lincolnshire Marsh flooded, the low hills became islands surrounded by saltmarshes, and these became some of the most important sites for settlement along the coast. One of these coastal zone ‘islands’ was Stain Hill near Mablethorpe, which rises from the surrounding marine alluvium to reach a maximum height of around 9m above sea-level. Significant quantities of Romano-British and Anglo-Saxon finds from this island, along with aerial photographs, suggest that there was some sort of significant settlement or estate centre located on this elevated point, whilst finds of flint artefacts suggest that there was at least occasional occupation here back into the Neolithic/Bronze Age.<sup>535</sup> Subsequently, it became the site for a medieval village and a chapel, with a moated manor house at its foot, although the village, church and manor have now largely disappeared.

To the east of Alford there is another, much larger, island-group, now occupied by the villages of Thurlby, Mumby, Anderby, Huttoft and Cumberworth. There is good evidence for prehistoric activity on these islands,

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<sup>534</sup> These barrier islands have already been mentioned in this section, but references to them and their effects include Swinnerton, ‘Post-glacial deposits of the Lincolnshire coast’, pp. 370–2; Swinnerton and Kent, *Geology of Lincolnshire*, second edition, pp. 99–103; Pye *et al.*, *Sand dune processes*, p. 8; Robinson, *Lincolnshire Seaside*, pp. 13, 17 (map), 20; Pawley, *Lincolnshire Coastal Villages*, pp. 69–70, 73–5, 80, 91; Bennett & Bennett (eds), *Historical Atlas of Lincolnshire* (Hull, 1993), p. 8; Institute of Estuarine and Coastal Studies, *Humber Estuary & Coast*, p. 33; Fenwick, *Lincolnshire Marsh*, pp. 54, 160, 174, 181–2, 189, 199, 202, 267, 304; Natural England, *Bridlington to Skegness*, pp. 11, 21; Derrett and Selby, *Lincolnshire Coast Submerged Landscape*, p. 14; and Barnes and King, ‘1953 storm flood’, pp. 142–3, 151 (map).

<sup>535</sup> See further C. Green, ‘Stain Hill and the Lincolnshire Marshes in the Anglo-Saxon period’, blog post, 2 November 2014, <https://www.caitlingreen.org/2014/11/stain-hill-anglo-saxon-marsh.html>. The finds recorded on the Lincolnshire HER are MLI41134 (Prehistoric worked flints), MLI41133 (53 Roman coins) and MLI41132 (20 Saxon finds).



Figure 121: The former islands are visible as slight rises in the flat Outmarsh, as seen here at Hannah, Old English *hana* + *æg*, ‘the island where cocks are found/bred’ or ‘Hana’s island’: the surrounding land lies at around 1.8m–2m OD, whilst the land on which St Andrew’s Church, Hannah, and Hill Farm lie reaches up to around 6.5m–7.1m OD.

via flint finds, and also Romano-British and Anglo-Saxon-era activity too, not only from the names Huttoft and Cumberworth (which are Old English in origin), but also from metal-detected finds and archaeological excavations. For example, chance finds from Cumberworth parish include part of a Late Roman crossbow brooch, a Late Roman clipped silver siliqua of Arcadius (395–402), early Anglo-Saxon metalwork indicative of the presence of a cemetery, and an Anglo-Saxon silver coin of *c.* 680–710.<sup>536</sup> At the same time, excavations at St Helen’s Church in the village of Cumberworth itself have seen the recovery of 26 burials from an Anglo-Saxon cemetery that was in turn overlain by a timber church, this last being probably demolished by the end of the tenth century.<sup>537</sup> To the south-east of this island group were a scattering of other small dry islands in the coastal marshes heading out towards the sea, including ones now occupied by the villages of Hogsthorpe and Helsey. Once again, these seem to have seen activity in the Romano-British and Anglo-Saxon periods, with finds of metalwork and even high-status gold pieces, although some of the place-names suggest more limited activity, such as Helsey, ‘the island where there is a shed for drying fish.’ Further south, there are further small glacial islands at Croft, at Wrangle and at Fishtoft. The glacial till island of Fishtoft and its immediate vicinity is particularly interesting, as this not only has a substantial quantity of Neolithic and Bronze Age finds, testifying to human activity out in the very midst of the coastal marshes from an early date, but also Romano-British and Middle Saxon finds, including evidence for pre-Viking salt-making.<sup>538</sup>

## Islands of sand on the Lincolnshire coast

Some islands on the Lincolnshire coastline had much less solid footings. Perhaps the most famous, or infamous, of these is the medieval pirate island of Ravenserodd, which witnesses describe being thrown up by the waves in the first half of the thirteenth century somewhere offshore of Grimsby, perhaps in the vicinity of Spurn Point. Initially used for drying nets, the sand island had become the site of a market and a fair by 1251, and by 1290

<sup>536</sup> Portable Antiquities Scheme LIN-6883D7, LIN-725431, LIN-1424E9, LIN-6D0CE4.

<sup>537</sup> Lincolnshire HER MLI81931 and MLI41986.

<sup>538</sup> T. W. Lane, *Mineral from the Marshes: Coastal Salt-Making in Lincolnshire* (Heckington, 2018), pp. 65, 83–4; Lincolnshire HER MLI84623, MLI89073, MLI97632 and MLI13362. The pottery finds include Middle Saxon Ipswich and Maxey wares, suggesting some sort of coastal trading activity here.



Figure 122: A 1702–1707 edition of Captain Greenville Collin’s chart of the River Humber, showing the islands of sand here, including Sunk Island of the coast of Holderness at the point where it was still an island in the process of reclamation, Burcom at the entrance to Grimsby Haven, and Bull Sand in the mouth of the Humber (Source: New York Public Library Map Div. [02-295](#), Public Domain).

the town and port of Ravenserodd had begun to seriously threaten the trade of nearby Grimsby, with contemporary Grimsby folk declaring it a pirate island at the mouth of Humber, preying on passing shipping. Indeed, the demise of this town during the following century was widely attributed to its evil character—as one chronicler put it, ‘by its wicked works and piracies, it provoked the wrath of God against itself beyond measure’ and was consequently swallowed by the sea. Over 200 buildings and properties had been lost by the mid-1340s, and by 1362 the once-prosperous town was ‘destroyed to its foundations’ and lay derelict, with its exact former location nowadays being uncertain.<sup>539</sup>

Other sand ‘islands’ along the Lincolnshire coast include North Somercotes, which largely lies atop an ancient sand-body first formed during the initial prehistoric flooding of the land here and which was then supplemented by storm beaches after the destruction of the offshore barrier islands.<sup>540</sup> ‘Old Skegness’, an ancient haven town lying just offshore from the current Skegness and which was destroyed by the sea in the 1500s, may well have been built on such a sand body too.<sup>541</sup> Needless to say, most of these ‘islands’ were, like Ravenserodd, very much at the whim of the tides. Burcom, for example, now exists as a sand bank below low-tide level close to the south shore of the Humber near Grimsby; however, it has an old name, OE *\*burg-cyme* or *\*burg-cuma*, meaning either ‘arrival at the town’ or ‘arriver at the town’, and on some nineteenth- and early twentieth-century maps and charts it seems to be shown as a dry sand—one that remained above the sea at high tide—or even an island,

<sup>539</sup> See on this site C. Green, ‘Ravenserodd and other lost settlements of the East Yorkshire coast’, blog post, 22 February 2016, <https://www.caitlingreen.org/2016/02/ravenserodd-lost-towns-yorkshire-coast.html>.

<sup>540</sup> Berridge and Pattison, *Grimsby and Patrington*, pp. 65–6 and figs 28 and 29.

<sup>541</sup> Robinson, *Lincolnshire Seaside*, p. 17 (map).

suggesting that its character may well have fluctuated over the centuries.<sup>542</sup> Similarly, ‘The Bull’ or Bull Sand, opposite Humberston, is shown as an island between Lincolnshire and Yorkshire in *c.* 1541 and a ‘dry sand’ in 1595, but ceased to be so by the seventeenth century; it is currently the site of Bull Sand Fort, a 4-storey steel and concrete fortification originally armed with four guns and built 1915–1919.<sup>543</sup>

## Islands of salt

The final category of lost Lincolnshire coastal islands are the ‘saltern mounds’, large piles of waste silt and sand produced by the medieval salt-making industry. These mounds, some standing 5–7 m above sea-level, initially acted as dry islands in the coastal marshes, and as each generation of mounds were reclaimed they became part of an odd, hilly landscape on the landward edge of the coastal zone, although over time the majority have been reduced by ploughing and remain visible only from the air and as a broad, low plateau on Lidar. The wide ridge of the Tofts, running south-west from Wainfleet, has its origins in such mounds,<sup>544</sup> while the town of Wainfleet itself is actually built on top of these waste mounds. Likewise, the landscape around Marshchapel, Grainthorpe and Tetney is largely constructed from these islands: the industry here was still in operation in 1595, when William Haiwarde drew a detailed map of Fulstow and Marshchapel showing the last days of this industry, and it only ceased to function in the early seventeenth century.<sup>545</sup> The sheer quantity of waste silt that must have been processed in order to create these massive landscape features is astonishing: the Marshchapel plateau formed from these salterns has been calculated to contain around 23 million cubic metres of waste silt, whilst that at Wainfleet may contain upwards of 90 million cubic metres.<sup>546</sup> Other, smaller groups of such mounds are also of considerable interest, with these being found in a number of the medieval havens of the coastline, including those of Leake, Wrangle, Saltfleet and Mar, as well as arguably providing the dry land on top of which a number of medieval churches in the Outmarsh were founded.<sup>547</sup>



Figure 123: A Lidar image of the saltern mounds in the Marshchapel area.

<sup>542</sup> R. Coates, ‘Reflections on some major Lincolnshire place-names. Part one: Algarkirk to Melton Ross’, *Journal of the English Place-Name Society* 40 (2008), 35–95 at p. 47; É. Reclus, *Universal Geography IV: The British Isles* (London, 1876), p. 235. G. Collins, *Chart of the River Humber* (1693), shows it as a dry, or nearly dry, sand too, as does an Ottoman Turkish map of 1803 in the *Cedid Atlas Tercümesi* (Library of Congress G1019.T2 1803).

<sup>543</sup> It is shown as an island on the map of the *Humber from Hull and Barton to Sea* (*c.* 1541–7, British Library Cotton Augustus Li f.86) and a dry sand on the 1595 coloured plan of the *River of Humber and of the Sea and Seacoast from Hull to Skarburgh* (1595, British Library Royal MS. 18. D.III). Bull Sand Fort is Historic England Listed Building 1083477.

<sup>544</sup> Simmons, ‘Landscape development of the Tofts’; D. S. Brew and G. Evans, ‘The stratigraphy and origin of the Tofts ridge in north-western Fenland, eastern England’, *Proceedings of the Geologists’ Association* 129 (2018), 135–43.

<sup>545</sup> C. Sturman, ‘Salt-making in the Lindsey Marshland in the 16th and early 17th centuries’, in N. Field and A. White (eds), *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 50–6; E. H. Rudkin and D. M. Owen, ‘The medieval salt industry of the Lindsey Marshland’, *Lincolnshire Architectural and Archaeological Society Reports and Papers* 8 (1960), 76–84; D. M. Grady, ‘Medieval and post-medieval salt extraction in north-east Lincolnshire’, in R. H. Bewley (ed.), *Lincolnshire’s Archaeology from the Air* (Lincoln, 1998), pp. 81–95.

<sup>546</sup> Simmons, ‘Landscape development of the Tofts’, pp. 21–2.

<sup>547</sup> A. E. B. Owen, ‘Salt, sea banks and medieval settlement on the Lindsey coast’, in N. Field and A. White (eds.), *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 46–9 at p. 46.

## 5 Wrecks and Wreckers on the Lincolnshire Coast

### Introduction

Despite its lack of high cliffs and sharp rocks, the Lincolnshire coast has long had a reputation as a danger to shipping. In the early nineteenth century, it was said that this coastline was ‘perhaps the most dangerous in the kingdom’, due to the paucity of good harbours and its treacherous shoals of shifting sands,<sup>548</sup> and there are dramatic tales of wrecks on the Lincolnshire coast from an early date, especially in times of extreme storms, when the sea overflowed its bounds and inundated the exceptionally low-lying villages of the Lincolnshire coast. One of the earliest of these comes from 1570, when a ship at Mumby Chapel—now Chapel St Leonards—was wrecked upon the roof of a house during the worst storm of the sixteenth century, according to the account in Holinshed’s contemporary chronicles:

This year [1570] the fifth of October chanced a terrible wind and rain both by sea and land ... *Mumby chappell*, the whole town was lost, except three houses. A ship was driven upon an house, the sailors thinking they had been upon a rock, committed themselves to God: and three of the mariners leapt out of the ship, and chanced to take hold on the house top, and so saved themselves: and the wife of the same lying in childbed, by climbing up into the top of the house, was also saved by the mariners, her husband and child being both drowned.<sup>549</sup>

Although this was an extreme example, other storms could be equally destructive, and the skeletons of half-buried wooden ships wrecked all along the Lincolnshire coast can still be seen at low tides and after storms.



Figure 124: Shipwreck at Sutton on Sea, located around 50 metres offshore; an edited version of an image by Richard Hoare available on [Geograph](#) (© Copyright Richard Hoare and licensed for reuse under a [CC BY-SA 2.0](#) licence).

<sup>548</sup> According to an early appeal for funds from the Lincolnshire Coast Shipwreck Association, founded 1823: W. Kime, *The Book of Skegness* (Buckingham, 1986), p. 93. On the LCSA, see G. Farr, *The Lincolnshire Coast Shipwreck Association 1827–1864* (Bristol, 1981).

<sup>549</sup> Holinshed, *Chronicles of England, Scotland and Ireland*, vol. 4, pp. 254–6 (with modernised spelling); Owen, ‘Chapel St Leonards and the flood of 5 October 1570’.

Indeed, a single storm of 31 August/1 September 1833 left more than 30 ships sunk or beached on the Lincolnshire shoreline, with fifteen bodies washing up amongst the wreckage the next day, whilst another in 1823 saw nearly 60 ships sunk or stranded—the crew of the *Neath Castle* all survived at Gibraltar Point, but the crew of the *Derby* was lost with all hands at Friskney, and the *Jason* completely turned over, its crew surviving the capsizing but then freezing to death whilst atop the keel, its captain subsequently washing up on the shore at Wainfleet.<sup>550</sup>

## Wrecks, wreckers, and the ‘right of wreck’ on the Lincolnshire coast

Although no medieval shipwreck remains are currently known from the beaches of Lincolnshire, documentary sources make it clear that such wrecks did frequently occur and that the question of who profited from the finding of them was a contested topic. Strictly speaking, the ‘right of wreck’ belonged to either the king or the local lord, to whom wrecks must be reported, and the wreckage could furthermore only be kept by them if no living thing survived the loss of the ship and no owner claimed the goods; however, local mariners and other coastal inhabitants often had other ideas on both these points.<sup>551</sup> For example, in 1353 a ship named *La Marie* bound for Berwick on Tweed was driven ashore in a storm at the medieval port of Saltfleethaven and broke up, scattering itself and its cargo of victuals and merchandise on the shore, all of which ‘some evildoers carried away’. A royal commission was set up to retrieve the cargo and the wreckage for the merchants who owned it, although it seems not to have met with much success, these having been apparently widely appropriated and sold on. So, William, son of Robert of Northcotes, had taken possession of one of the ship’s boats along with 14 oars, an anchor, a cable, and an axe; William Huk of Somercotes had a small mast; John de Welle (lord of the manor of Conisholme) claimed the topcastle from the mast; William Galay of Grainthorpe took away a waggon full of ropes and cords; and William Ton of Grimsby had taken possession of a ‘great boat’, which he had subsequently sold on to Robert Thorold of Gainsborough. Indeed, the merchants ended up appealing to the king for his personal intervention in this case, when the commission failed to restore their property.<sup>552</sup>

Local documents similarly tell of many medieval wrecks along the coast and the ‘wreckers’ or ‘beach harvesters’ who found them. In December 1436, the Ingoldmells Court Rolls recorded as ‘wreck of the sea’ seven casks of beer (one of which was found empty in Skegness church!), one cask of black soap, and multiple boards of fir and wainscots that were in the custody of several inhabitants of Ingoldmells and Skegness.<sup>553</sup> Similarly, in 1302 William Lawys had a cow seized as punishment ‘for wreck of the sea carried away’ without reporting, and in 1569 4 men—including one gentleman—were ordered to appear with the ‘certain iron war engine [gun]... weighing six stone of iron’ that they had recovered from the beach.<sup>554</sup> Some of those accused of ‘carrying away’ the ‘wreck of the sea’ appear to have been repeat offenders, as in 1316 when the Court Rolls comment that Thomas Bobber, Richard Bole of Friskney, Ralph Barker of Partney, Robert Pimake, William Scotte, and Simon the servant of John Pedder, were brought up, ‘as often’, for ‘wreck of the sea carried off’, whilst the popularity of ‘wrecking’/‘beach harvesting’ can be seen in 1346, when 23 people were ordered to answer for wool that they ‘found of wreck of the sea’.<sup>555</sup>

Considerable local interest in the items thrown up by the rage of the sea continued well into the modern era. In 1826, a government note reportedly described the inhabitants of the Saltfleet region as ‘Christian savages on

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<sup>550</sup> W. Kime, *The Lincolnshire Seaside* (Stroud, 2005), pp. 97, 100; *Bury and Norwich Post*, 19 November 1823, p. 3; Robinson, *Lincolnshire Seaside*, p. 116.

<sup>551</sup> See R. Melikan, ‘Shippers, salvors, and sovereigns: competing interests in the medieval law of shipwreck’, *Journal of Legal History* 11.2 (1990), 163–82; Pawley, *Lincolnshire Coastal Villages*, pp. 28–32.

<sup>552</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 30–1; Historic England Research Records 1447414 and 1446389.

<sup>553</sup> W. O. Massingberd, *Court Rolls of the Manor of Ingoldmells in the County of Lincoln* (London, 1902), p. 272.

<sup>554</sup> Massingberd, *Manor of Ingoldmells*, pp. 16–17, 22, 25, 295.

<sup>555</sup> Massingberd, *Manor of Ingoldmells*, pp. 58–9, 65, 67, 123–4.



their sand-hills’, who, when they see a vessel driven onto the beach, ‘clap their hands and shout excitedly, “Thank God a wreck!””:

Perhaps no race of men possess so little of the milk of human kindness as the inhabitants of Saltfleet, and some other of the marsh towns and villages, and better had a vessel to be stranded on the coast of Africa than on the shores of Lincolnshire.<sup>556</sup>

Similar sentiments issued from the judicial bench. In April 1852, John Dobson of North Somercotes was given 18 months hard labour for ‘stealing... from a stranded ship’ (the *Jeune Emilie*) at Saltfleet, and the Chairman of the Bench at Louth accompanied his sentencing with ‘forcible observations upon the disgraceful reputation the Lincolnshire wreckers were obtaining for their inhumanity’ by their preying on the ‘unfortunate mariners so often wrecked upon the dangerous coast of East Lincolnshire’, adding that the Bench was determined to ‘check that melancholy species of dishonesty as much as possible’.<sup>557</sup>

This increasingly negative portrayal of ‘Lincolnshire wreckers’—perhaps more accurately described in most cases as ‘beach-combers’ or ‘beach harvesters’—reflected a tightening of governmental control and the loss of customary wreck rights for both lords and inhabitants in this era, and is comparable to the contemporary moral panics over ‘wrecking’ in Cornwall and elsewhere.<sup>558</sup> Despite this, however, the idea that items thrown up by the sea were there for the taking continued to be securely embedded in the maritime communities of Lincolnshire, as can be seen from the records of North Somercotes parish school, whose log books make frequent comment on the absences from school caused by wrecks. On 13 February 1871, for example, it was recorded that several boys were absent ‘being occupied on the sea shore gathering coal, corn, etc. from wrecked vessels’. Likewise, on 19 October 1869, it was said to be ‘Very stormy. 9 or 10 ships came ashore and many of the sailors drowned.

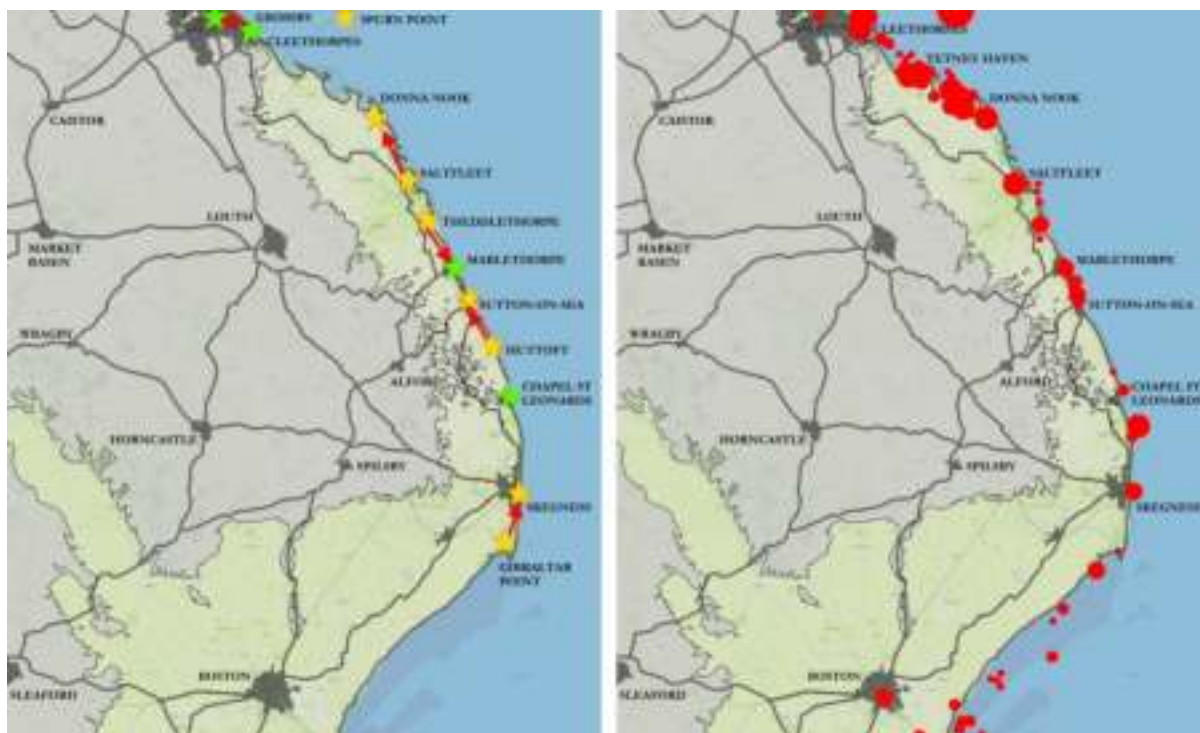


Figure 125: (a) The location of lifeboat stations of the first (yellow) and second (green) halves of the nineteenth century, showing the relocation of some of these; (b) Shipwreck remains and records from the Lincolnshire coast on the CITIZAN database (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

<sup>556</sup> Kime, *Lincolnshire Seaside*, p. 110.

<sup>557</sup> *Stamford Mercury*, 23 January, p. 2; 30 January 1852, p. 4; 16 April 1852, p. 2.

<sup>558</sup> See especially C. J. Pearce, ‘*So Barbarous a Practice*’: *Cornish Wrecking, ca. 1700–1860, and its Survival as Popular Myth* (University of Greenwich PhD Thesis, 2007)



Figure 126: Skegness seafront in the early twentieth century from a postcard of that era, showing ‘the ship Eliza’ in the background, a schooner towed to Skegness beach for breaking up in 1882 that was purchased and used by Joe Wingate as a museum on the beach.

Very few children in school’, and on 6 December 1882, only 48 of 175 attended school after a ship sank with the loss of all hands and the shore was ‘strewn with bags and wreckage’.<sup>559</sup>

## Saving lives on the Lincolnshire coast

Despite the nineteenth-century claims of the ‘inhumanity’ of Lincolnshire coastal communities, the same maritime communities also fulfilled a key humanitarian role—wrecking, lifesaving, and rendering aid to those who had escaped the waters were not mutually exclusive activities for these communities. At first, such aid was naturally done provided on an *ad hoc* basis, but over time it became increasingly regularised, with rescue boats organised by local volunteers stationed along the coast, like that at Theddlethorpe, which was purchased by subscription in the 1790s and saved 22 vessels in just three years.<sup>560</sup> This was all put on a formal footing in the 1820s with the foundation of the National Institution for the Preservation of Life from Shipwreck (later the RNLI) and the Lincolnshire Coast Shipwreck Association (founded 1827).<sup>561</sup> Subsequently, a number of lifeboat stations were founded and maintained for various periods from Gibraltar Point to Grimsby, with the boats being staffed by volunteer local mariners who often showed incredible heroism.<sup>562</sup> The community investment in this activity can be seen in the North Somercotes school logs record, which show not only significant pupil absences for wrecking, but also for the launch of the new lifeboat at Donna Nook and for lifeboat rocket practice.<sup>563</sup> It ought also to be remembered that members of the coastal community who did not serve on the lifeboats also continued to take part in lifesaving too. In 1833, for instance, the Donna Nook lifeboat crew tried and failed to launch the lifeboat to save a ship named the *Hermione*, but kept getting blown back, so a local farmer Richard Hoodless mounted his horse and swam it into the wild seas, succeeding in saving four of the eight-man crew by

<sup>559</sup> R. Russell, ‘Shipwrecks and school attendance’, *Lincolnshire Past & Present* 42 (2000–01), pp. 14–15.

<sup>560</sup> Kime, *Lincolnshire Seaside*, p. 98; Robinson, *Lincolnshire Seaside*, p. 116.

<sup>561</sup> Farr, *Lincolnshire Coast Shipwreck Association*; Kime, *Skegness*, pp. 93–5.

<sup>562</sup> Farr, *Lincolnshire Coast Shipwreck Association*, who discusses the lifeboat stations up the coast and some of the rescues; see also Robinson, *Lincolnshire Seaside*, pp. 115–19; Kime, *Skegness*, pp. 93–6; Kime, *Lincolnshire Seaside*, pp. 100–05.

<sup>563</sup> Russell, ‘Shipwrecks and school attendance’, p. 15.

this method before the vessel was wrecked.<sup>564</sup> Likewise, it is interesting to note that some of the ‘wreckers’ condemned by the courts came from families involved in saving lives—so, the John Dobson of North Somercotes who was sent to prison for wrecking in 1852 appears to be the nephew of a Joseph Dobson who rescued a crew of four from the brig *Amos* in his own boat on 8 May 1843, and the cousin of that James Dobson who, with William Risdale, rescued the master and mate of the *William Spencer* on horseback in March 1844.<sup>565</sup>

## The afterlife of vessels on the beach

The vessels that ended up on the Lincolnshire coast had a variety of fates. Some still lie there today, exposed by the shifting sands and tides and recorded by groups such as CITiZAN,<sup>566</sup> with notable concentrations around Cleethorpes and Sutton-on-Sea, in part due to a greater degree of recording in those areas.<sup>567</sup> Others were taken by the local community and their lords, as described above, or alternatively claimed by their owners, who often in the modern era arranged for the breaking up of the ship and the sale of its constituent elements by local agents at auction. So, for example, in 1865 there was a sale of four hundred lots of ‘ship wood, saved from the *Perseverance*, of London’ at the Ship Inn, Saltfleet, including 16,000 feet of oak and fir planking, 300 oak posts, and one ton of ‘iron bolts and spikes’, whilst in 1883 the ‘ship wood’ from the vessel *Fourth of November* was being sold by auction on land next to the Sea View Hotel, Skegness.<sup>568</sup> Some ships were, however, deliberately beached on the coast. In the Mablethorpe area in particular, ship-breaking businesses are known to have operated on the beaches, with Jabez Mountain and John Shaw undertaking this business here in the late eighteenth and early nineteenth centuries, and many houses and properties in the coastal area are said to have had beams, gateposts or fences constructed from reclaimed ship wood.<sup>569</sup> A few of the vessels escaped this fate, however. The *Eliza*, for example, was purchased at Kings Lynn in 1882 and towed to Skegness for sale and breaking up on the beach. It was, however, bought by one Joe Wingate. He kept the ship whole on Skegness beach and turned it into a museum, exhibiting marine curiosities including a 70ft whale skeleton—a role it played until 1911, when it was toppled by a gale, after which it was finally broken up and sold for £16. Likewise, at Mablethorpe, ‘Professor’ Hobson Boccock obtained first the two-masted *Emma*, which had been beached for breaking, and used it to display ‘relics and curiosities from sea and land’, and then the three-masted *Stavanger* in 1914 to continue his attraction after the *Emma* had to be broken up.<sup>570</sup>

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<sup>564</sup> *Chester Chronicle*, 02 February 1849, p. 1; *Boston Guardian*, 29 November 1884, p. 2; Robinson, *Lincolnshire Seaside*, p. 116; Kime, *Lincolnshire Seaside*, p. 101.

<sup>565</sup> Based on North Somercotes baptismal and census records; for the rescues, see Farr, *Lincolnshire Coast Shipwreck Association*, p. 16; Robinson, *Lincolnshire Seaside*, pp. 116–17.

<sup>566</sup> The online CITiZAN database and map is available at <https://citizan.org.uk/interactive-coastal-map>

<sup>567</sup> See, for example, J. Havell, ‘Rapid wreck recording on the Lincolnshire coast’, CITiZAN blog, 21 May 2018, <https://citizan.org.uk/blog/2018/May/21/rapid-wreck-recording-lincolnshire-coast/>.

<sup>568</sup> *Louth and North Lincolnshire Advertiser*, 23 December 1865, p. 4; *Boston Guardian*, 5 May 1883, p. 8.

<sup>569</sup> Kime, *Lincolnshire Seaside*, pp. 113–14.

<sup>570</sup> Kime, *Lincolnshire Seaside*, p. 114.

## 6 Pirates and Smugglers on the Lincolnshire Coast

### Introduction

Given its lengthy and lightly populated coastline prior to nineteenth century, characterised by wide marshes and creeks, it is perhaps no surprise that the Lincolnshire seashore has plentiful evidence for both piracy and smuggling over the years, with the inhabitants of the coast being variously the victims of the former or the instigators of both.

### Lookouts, fortresses and medieval pirates

That the Viking threat to the east coast of England was, at first, piratical is clear; as Alcuin of York put it in AD 797, ‘a pagan people is becoming accustomed to laying waste our shores with piratical robbery’,<sup>571</sup> and there seem to be good indications that the Lincolnshire coastal landscape was fortified in response to this threat. In particular, a number of names involving Old English *tōt* (‘lookout place’) are found all along the coast and overlooking it, along with names involving OE *burb* (‘fortress’) in the same area, all of which may well be associated with Anglo-Saxon/early Viking-era civil defence and responses to the threat of Viking coastal raiders from the late eighth century onwards.<sup>572</sup> The most dramatic of these sites was arguably Toote Hill (‘lookout-hill’) near Grimsby, which was quarried away in the nineteenth and early twentieth centuries. This once stood 15–30m high and had an early earthwork fortress just to its west, both defensive sites being located on a low clay promontory that projected out into the coastal marshes.<sup>573</sup>

As written documentation increased into the medieval era, the people of the Lincolnshire coast can be definitely said to have ‘sinned as often as they were sinned against’ when it came to piracy. In 1387, for example, three Grimsby men boarded a vessel from Wilgrip (a port near Theddlethorpe) at Skegness and made off with its contents at night, whilst John Selby of Grimsby complained in 1365 that Walter Skott, also of Grimsby, attacked his vessel with arrows at Saltfleethaven.<sup>574</sup> In both cases, the authorities could do little, it seems, and such piracy would appear to have been an accepted part of maritime life, although punishments were sometimes metered out, as in 1228 when William



Figure 127: A depiction of Viking raiders on the way to attack the town of Guérande, France, in c. AD 919, from a manuscript of c. 1100 (Source: Bibliothèque nationale de France. Département des Manuscrits. NAL 1390, f. 7r, Public Domain).

<sup>571</sup> E. P. Cheyney, *Readings in English History Drawn from the Original Sources* (Boston, MA, 1922), p. 57.

<sup>572</sup> See J. Baker and S. Brookes, ‘Signalling intent: beacons, lookouts and military communications’, in M. C. Hyer and G. R. Owen-Crocker (eds.), *The Material Culture of the Built Environment in the Anglo-Saxon World* (Liverpool, 2017), pp. 216–34, and also J. Baker and S. Brookes, *Beyond the Burghal Hidage: Anglo-Saxon Civil Defence in the Viking Age* (Leiden, 2013).

<sup>573</sup> C. Green, ‘Toote Hill and Cun Hu Hill: two lost pre-Viking sites near Grimsby’, blog post, 31 August 2014, <https://www.caitlingreen.org/2014/08/toote-hill-and-cun-hu-hill-grimsby.html>; B. Cox, ‘Yarboroughs in Lindsey’, *Journal of the English Place-Name Society* 28 (1995–6), 50–60.

<sup>574</sup> Pawley, *Lincolnshire Coastal Villages*, p. 35.

de Briggeho of Grimsby was hanged at York for piracy.<sup>575</sup> Not all incidents involved local people, however—in 1321, pirates from Denmark attacked the London merchant ship *La Margarete* off the coast at Saltfleetby, causing £200 of losses (around £150,000 today), whilst in the following year three mariners from the medieval port of Skegness made off with a ship from Eastland (medieval Estonia) lying at anchor there.<sup>576</sup> Perhaps the most interesting example of piracy on the medieval Lincolnshire coast comes in the form of its very own ‘pirate island’ located just off the coast from Grimsby, in the Humber mouth. The sand-island of Ravenserodd, discussed above, had begun to seriously threaten the trade of Grimsby by the 1290s, and when the sea completely consumed it between the 1330s and the 1360s, contemporaries were clear that this island-town was to blame for its own downfall, as it had provoked God’s wrath ‘by its wicked works and piracies’.<sup>577</sup>

## Pirates of the Elizabethan Age and after

One of the more notable Lincolnshire pirates of the sixteenth century was William Johnson of Boston, who, in a ‘ship all black’ and ‘furnished with a quantity of munitions of war’, was accused in the early 1560s of repeatedly waylaying and stealing from Flemish merchant and fishing boats, in at least one case killing their captain. Johnson and his men reportedly committed their crimes ‘masked, and so disguised as they should not be known’, before taking the spoils back to Boston to be sold.<sup>578</sup> Needless to say, Boston was not alone in having a piracy problem in the Tudor era. Multiple cases were reported in the 1570s of people either receiving goods from pirates or of supplying them in the area from Boston to Grimsby. The government took steps to deal with this issue in the reign of Elizabeth I, and deputies instructed to prevent both piracy and smuggling were stationed at each creek and port, although this wasn’t wholly successful—in some cases they seem to have actually worked with the pirates, either releasing them from custody (as Richard Holmes at Grimsby did with the pirate Bellingham and his company) or themselves supplying them (as Thomas Stone did from Wainfleet, receiving ‘certain hearing [herrings] and warropes’ from Bellingham and coals from a pirate named Gullet for his trouble).<sup>579</sup> Ingoldmells Haven was apparently particularly notorious as a haunt of pirates, being said to be ‘otherwise called Theefes [Thieves] Creek’ (a name that was also suggestively applied to a creek at Wainfleet in this era),<sup>580</sup> and in consequence an armed expedition was sent against the Ingoldmells pirates from Hull in the summer of 1577. This succeeded in capturing a pirate vessel named the *Elizabeth* along with its captain Launcelot Grenewell and 16 others, as well as Thomas Thory, gentleman, from Ingoldmells and Richard Holmes and Christopher Jackson, both yeoman of Grimsby, who were charged with receiving the stolen goods and supplying the pirates. Ten men were subsequently hanged at Hull as a result of all of this.<sup>581</sup>

In the post-medieval era, the remote creeks and minor havens of the Lincolnshire coast seem to have been in notable decline, with many silting up and being lost, and this decline appears to have greatly assisted official efforts against local piracy. Indeed, concern around piracy in the seventeenth century seems primarily to have

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<sup>575</sup> Gillett, *History of Grimsby*, p. 13.

<sup>576</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 35–6.

<sup>577</sup> T. Sheppard, *The Lost Towns of the Yorkshire Coast* (London, 1912), p. 96.

<sup>578</sup> J. Stevenson (ed.), *Calendar of State Papers, Foreign Series, of the Reign of Elizabeth, 1561–1562* (London, 1866), pp. 133–5, 137.

<sup>579</sup> Pawley, *Lincolnshire Coastal Villages*, pp. 32–9, 51–7, 131–7, has a good analysis of piratical activity associated with the creeks and the attempts to control it.

<sup>580</sup> J. Roche (ed.), *Acts of the Privy Council of England: New Series, Vol. X, A.D. 1577–1578* (London, 1895), pp. 18–19, 141; E. Gillett and K. A. MacMahon, *A History of Hull* (Hull, 1989), p. 156. Apparently the King of Denmark had written to Queen Elizabeth to complain of the activities of ‘one Launce, a pyratte’ in the ‘haven of Englemens’ (Ingoldmells), Lincolnshire, who had taken a ship with a cargo of rye belonging to one Cornelis Cornelison, and a letter was subsequently sent to the Mayor of Boston in January 1577 instructing him to commit to prison the ‘pirattes which have committed sundrye pyracies at Yngolmells Haven, otherwise called Theefes Creeke’.

<sup>581</sup> H. Good, ‘Hull’s expedition against pirates’, blog post, 13 March 2017, <https://elizabethanhull.wordpress.com/2017/03/13/hulls-expedition-against-pirates/>, has a wealth of detail about this expedition and the resultant prosecutions.

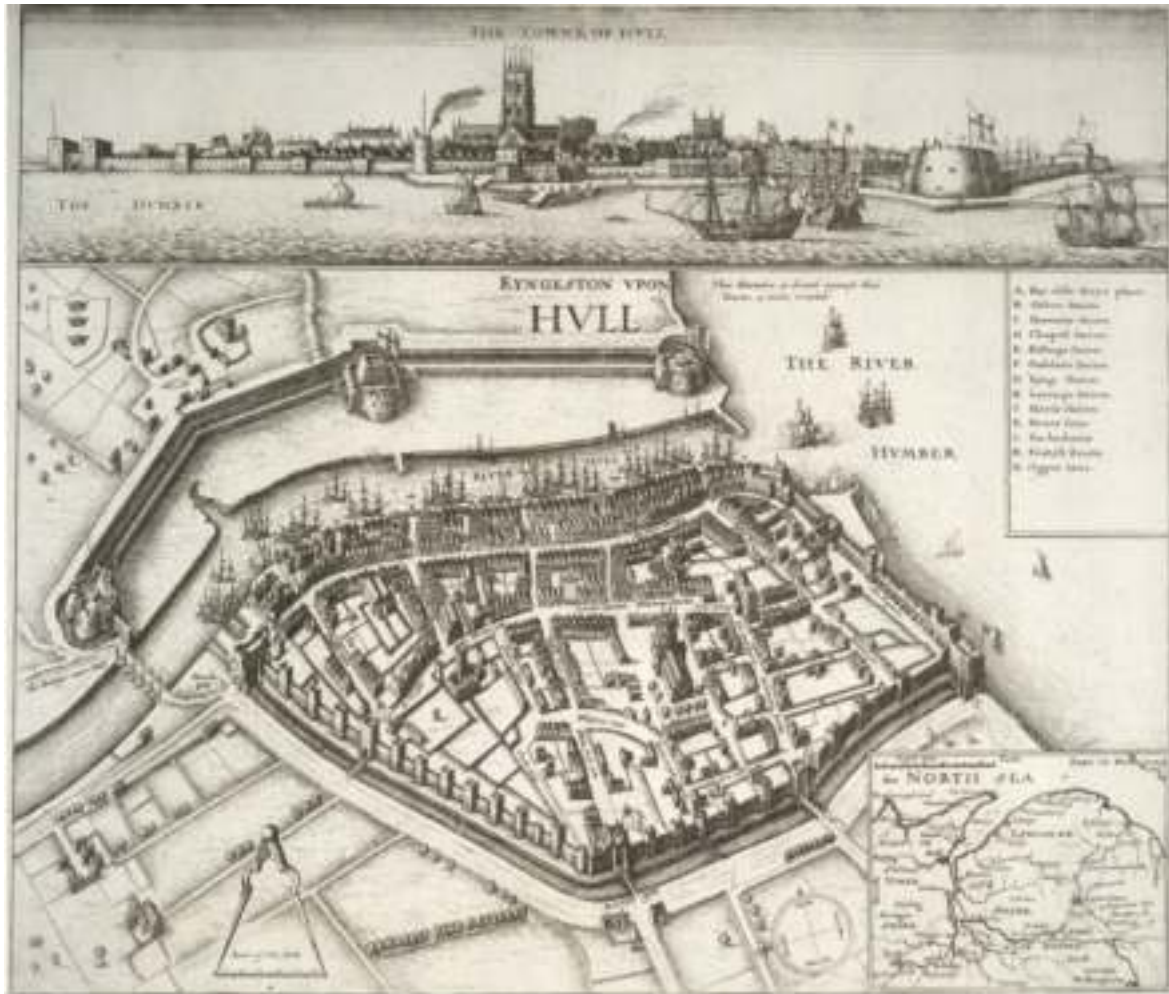


Figure 128: Hull in the first half of the seventeenth century; the pirates from Lincolnshire hanged here in 1579 were probably executed in the same place as a Hull man convicted of murder and robbery on the high seas in 1593—he was hanged ‘by the south blockhouse within Humber bankes’, just inland of what is now The Deep (Source: [British Library](#)/University of Toronto, Wenceslaus Hollar Digital Collection, Public Domain).

been aimed at the threat from foreign ships, whose attacks kept Lincolnshire ships in port and disrupted trade. In July 1672, for example, during the Third Anglo–Dutch War, Colonel John Butler wrote that the Lincolnshire coast was ‘now so infested with small privateers that our merchants dare not send a vessel to sea’, and described how two ships delivering coals near Wainfleet and Ingoldmells were taken by one of these.<sup>582</sup> The local mariners had clearly not forgotten how to handle themselves, however, as a dozen or so local men joined up with the seamen who had escaped the Dutch to give chase and succeeded in driving the privateer away, recapturing the two ships, and ensuring that that the *Happy Entrance*—a Boston wine-ship that the privateer had been waiting for—successfully avoided falling into Dutch hands. A similar situation occurred at Grainthorpe, where a coal ship forced to shore by Dutch privateers was protected from plundering by the local inhabitants, who gathered on the beach and drove off the landing party.<sup>583</sup>

### The smugglers of the Lincolnshire coast

If piracy seems to have been in notable decline after the sixteenth century, aside from in times of warfare, the same cannot be said for its close relation, smuggling. Smuggling was certainly present all along the coastline in earlier periods, being apparently focussed around the creeks and havens of the medieval coastline. For example, in 1274–5, when there was an embargo on the export of wool, William de Len of Louth and others conspired

<sup>582</sup> F. H. B. Daniell (ed.), *Calendar of State Papers Domestic: Charles II, 1672* (London, 1899), pp. 408, 424.

<sup>583</sup> A. A. Garner, *Boston, Politics and the Sea, 1652–1674* (Boston, 1975), p. 35.



Figure 129: The probable location of The Scabbed Lamb at Jackson's Corner, a notorious smuggling inn—the map here is based on the 1840s Tithe Maps of Ingoldmells, Winthorpe and Skegness.

to smuggle 200 sacks of wool—worth 100s a sack—out of the country in vessels belonging to William at Saltfleet and Swine Havens, bribing the sheriff, two under-sheriffs, and the local lord of Swine Haven (Alan de Conisholm) to achieve this.<sup>584</sup> Similarly, in 1377 Thomas Maryng of Louth was pardoned for having transported 2000 quarters of wheat and 1000 of beans to Scotland from Wainfleet, Wilgrip and Saltfleet Havens in 1374–5, along with another 180 quarters of wheat, 40 of beans and peas, and 40 of barley from Saltfleet alone, despite a royal prohibition on such exports to the northern kingdom.<sup>585</sup> Nonetheless, the peak in smuggling activity seems to have come somewhat later, in the eighteenth and nineteenth centuries.<sup>586</sup> Smugglers along the bulk of the coast often put out from the beaches and remaining creeks here in small boats and met larger smuggling ships out at sea, whilst inns along the coast, often located close to the dunes or minor creeks, seem to have been key focal points in this era for smuggling operations. For example, Joseph Lowe, keeper of the Scabbed Lamb Inn on the coast at the Skegness–Ingoldmells boundary, was fined £1000 (£90,000 today) in 1834 for smuggling, his inn—like Ravenserodd, perhaps—being subsequently eaten by the sea later in that century.<sup>587</sup> Similarly, when alterations were made at The Vine at Skegness in 1902, a skeleton wearing buttons bearing the Royal insignia was discovered; the man's identity is uncertain, but it is possible that he was a customs riding officer of the preventative service that disappeared in the nineteenth century and who met an unfortunate end having attempted to apprehend his quarry at Skegness.<sup>588</sup>

Other key smuggling sites along the coast included Oliver's Gap, Theddlethorpe, and also the sandhills at Mablethorpe, where a sand excavation undertaken by children close to the promenade at the beginning of the

<sup>584</sup> Pawley, *Lincolnshire Coastal Villages*, p. 24; Owen, 'Saltfleet Haven', p. 93.

<sup>585</sup> Owen, 'Saltfleet Haven', p. 94.

<sup>586</sup> Robinson, *Lincolnshire Seaside*, p. 45.

<sup>587</sup> Kime, *Skegness*, p. 22; Robinson, *Lincolnshire Seaside*, p. 46.

<sup>588</sup> Kime, *Lincolnshire Seaside*, p. 109.

twentieth century uncovered a smuggled hogshead of tobacco that had been buried but never returned for.<sup>589</sup> Another probable site for smuggling activity is the former haven at Crook Bank, aka Theddlethorpe Haven or The Old Gout (once apparently part of Wilgrip Haven), on the Theddlethorpe–Mablethorpe parish boundary. In November 1838, a significant smuggling operation was uncovered here. According to the court reports, two officers in the preventative service (John Gallagher and William Harvey) were on duty on the coast at Theddlethorpe, when they were induced to go to a beer-house in Mablethorpe—the Book in Hand—by a John Bell and his son George Bell. The latter seems to have intended to get the officers drunk whilst only pretending to drink himself, but one of the officers only pretended to drink too, and he subsequently followed George Bell back to John Bell’s house, which was said to be ‘situated on the inside of the sea-bank’ and which tithe records show was in the old Crook Bank haven site.<sup>590</sup> Gallagher reported that he:

heard the noise of carts and the subdued voices of men; he crept near, and saw the cart stop opposite the house, and about 30 men, among whom was the defendant [George Bell], loading them with casks; on the defendant observing Gallagher, he called out to the party that the coast-guard was upon them, and a man drove a cart against Gallagher, knocking him down and trying to run over him...

Gallagher recovered his feet and, drawing his cutlass and pistols, he pretended to call out to Lieutenant Lester of the coast-guard (who was not, in fact, present), telling him and his men to fire upon the smugglers, and then started ‘brisk fire with his pistols’. He apparently ‘so frightened the smugglers that they all decamped’, leaving behind 14 casks of tobacco, 15 tubs of spirits, a case of cigars, and a case of Eau de Cologne! In the end, Bell was found guilty and ordered to pay a fine of £100 (about £7,750 today) or spend six months in prison.<sup>591</sup>



Figure 130: John Bell’s house was located in the former haven at The Old Gout, seen here on the 1824 OS map when it was still filled with water (Source: Ordnance Survey, 1824/[Wikimedia Commons](#)).

<sup>589</sup> J. C. Walter, ‘Smuggling anecdotes’, *Sleaford Gazette*, 10 August 1907, p. 3; J. Manning, ‘Stories of smuggling’, *Louth Standard*, 7 November 1936, p. 8; Robinson, *Lincolnshire Seaside*, p. 48. Apparently, in the period from 1887–1907, smuggled spirits were also found buried in the sandhills here (Walter, ‘Smuggling anecdotes’, p. 3).

<sup>590</sup> Hill, *Theddlethorpe All Saints and Theddlethorpe Saint Helen’s Tithe Map* (1841) and the associated apportionment.

<sup>591</sup> *Lincolnshire Chronicle*, 7 December 1838, p. 4; *Stamford Mercury*, 30 November 1838, p. 3.



## 7 Landscapes of Defence on the Lincolnshire Coast

### Introduction

The coastline between Grimsby and Boston is nowadays around 75 miles (120km) long<sup>592</sup> and was even longer in the Late Roman to early medieval period, when it was studded by wide tidal inlets and tempting estuarine rivers—as such, it is hardly surprising that this landscape has traces of multiple efforts over the centuries to protect it from external enemies.

### Roman defences

Although the two surviving Roman walled forts of eastern Lincolnshire at Caistor and Horncastle lie well inland from the coast, there are good reasons to think that the town of ‘Old Skegness’—swallowed by the tide in the early 1500s and probably located out to sea from Skegness pier—may well have been a third Late Roman walled site. This town would probably have acted as both a terminus for a ferry across the Wash from Norfolk and as a northern extension of the Saxon Shore Fort system, designed to protect the hinterland of the Roman provincial capital at Lincoln. Such an idea finds important support not only in sixteenth-century accounts of Skegness as a walled town and local medieval field-names that derive from Old English *caester-land*, ‘land near to a Roman fortress’, but also the fact that the eleventh-century name for Skegness was *Tric*. This comes from the Latin word for ‘ferry’ via a Late British/Archaic Welsh intermediary, which indicates that this name must be a genuine survival from the Late Roman/post-Roman period.<sup>593</sup> Likewise, it is noteworthy that Roman finds from the Skegness area include both a Late Roman prick spur and a gold coin, both find-types being considered indicative of the presence of the Late Roman army.<sup>594</sup> Whether there were more defended sites northwards along the coast is open to debate, but cases have been made for Late Roman earthwork forts at Yarburgh, near Louth,<sup>595</sup> and Cun Hu Hill, near Grimsby,<sup>596</sup> whilst a Late Roman crossbow brooch—often considered to be ‘military metalwork’—has been found on the Outmarsh island of Cumberworth.<sup>597</sup>

### Anglo-Saxon and Viking defence

Looking into the post-Roman period, it can be suggested that place-names located all the way down the coastline of Lincolnshire may well reflect the presence of early medieval defensive systems here. As was noted above and in Section 2, the names of interest here primarily involve Old English *tōt*, ‘lookout place’—such names are believed to be associated with Anglo-Saxon/early Viking-era civil defence and responses to the threat of Viking coastal raiders from the late eighth century onwards,<sup>598</sup> and they are found all along the pre-Viking coast and

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<sup>592</sup> As noted in Section 1, this figure is based on a measurement of the Ordnance Survey 1:250,000 scale colour raster map of June 2021, available under an OS OpenData licence.

<sup>593</sup> See B. Whitwell, *Roman Lincolnshire* (Lincoln, 1992), pp. 51–3, and A. Owen and R. Coates, ‘*Traiectus/Tric/Skegness*: a Domesday name explained’, *Lincolnshire History and Archaeology* 38 (2003), 42–4.

<sup>594</sup> C. Green, *Britons and Anglo-Saxons: Lincolnshire AD 400–650*, second edition (Lincoln, 2020), pp. xxxv–xxxviii; for the Skegness spur, see K. Leahy, ‘Three Roman rivet spurs from Lincolnshire’, *Antiquaries Journal* 76 (1996), 237–40, and for the gold coin, which was found just inland at Burgh-le-Marsh, see Lincolnshire HER MLI41564.

<sup>595</sup> Green, *Origins of Louth*, pp. 55–6, 65; B. Cox, ‘Yarboroughs in Lindsey’, *Journal of the English Place-Name Society* 28 (1994–5), 50–60.

<sup>596</sup> Cox, ‘Yarboroughs in Lindsey’; Green, ‘Toote Hill and Cun Hu Hill’.

<sup>597</sup> Portable Antiquities Scheme LIN-6883D7; on crossbow brooches, see, for example, R. Collins, ‘Brooch use in the 4th- to 5th-century frontier’, in R. Collins and L. Allason-Jones (eds), *Finds From the Frontier: Material Culture in the 4th–5th Centuries* (London, 2010), pp. 64–77, and R. Collins, ‘Decline, collapse, or transformation? The case for the northern frontier of Britannia’, in N. Roymans *et al*, *Social Dynamics in the Northwest Frontiers of the Late Roman Empire* (Amsterdam, 2017), pp. 203–20 (Collins maps the Cumberworth example on p. 210, fig. 2).

<sup>598</sup> See J. Baker and S. Brookes, ‘Signalling intent: beacons, lookouts and military communications’, in M. C. Hyer and G. R. Owen-Crocker (eds.), *The Material Culture of the Built Environment in the Anglo-Saxon World* (Liverpool, 2017), pp. 216–34, and also J. Baker and S. Brookes, *Beyond the Burghal Hidage: Anglo-Saxon Civil Defence in the Viking Age* (Leiden, 2013).

overlooking it, as are several names involving OE *burh*, ‘fortress’ (fig. 69). The clearest example is Toot Hill (‘lookout-hill’) near Grimsby, which once stood 15–30m high on the edge of the coastal marshes and a little to the east of the earthen fort of Cun Hu Hill.<sup>599</sup> Further names referring to look-out hills and fortifications are found inland along the southern bank of the Humber, through to Barton-upon-Humber, where a round, 250m-wide earthen enclosure has been excavated that probably represents a ninth-century Anglo-Saxon fortification.<sup>600</sup> Southwards along the coast from Grimsby we find additional relevant names. There was, for example, a *\*tōt-arm-hyll*, ‘look-out house hill’, at Cleethorpes, presumably located atop the high cliff here—the only cliffs on the Lincolnshire coast.<sup>601</sup> Other arguably pertinent names include a *Tuttyll haven*/Tuttle Drain between Tetney and North Cotes (which derives from OE *tōt-hyll*), Tothill and Toot Hill in Tothill parish, Toynton All Saints and Toynton St Peter just above the Fen edge, and further possible ‘Toot’ names in Fishtoft, East Keal, Spilsby, Tattershall and perhaps Gunby/Bratoft parishes.<sup>602</sup> It is interesting to note from fig. 69 that the distribution of these ‘look-out’ place-names in Lincolnshire is very much coastal, whereas the ‘fortress’ names are less so and show in many cases a close link with Anglo-Saxon road system (the one potential ‘watch-hill’ name, Warden Hill, is also on an early inland road, although the coast can be seen from it). This suggests that, whilst some of the Anglo-Saxon fortresses were probably situated with coastal defence in mind, others may have other origins, perhaps relating to the road system or other features in the Anglo-Saxon landscape, as may be the case for the group of 4 or 5 surrounding the territory of Louth (including Ludborough, ‘the fortress belonging to Louth’), where there was an important Middle Saxon monastery.<sup>603</sup>

## Castles, beacons and other defensive sites in the medieval and post-medieval periods

There are several medieval castles located either in or on the edge of the coastal zone. Castle Carlton, Toot Hill (in Tothill parish), Castle Hill

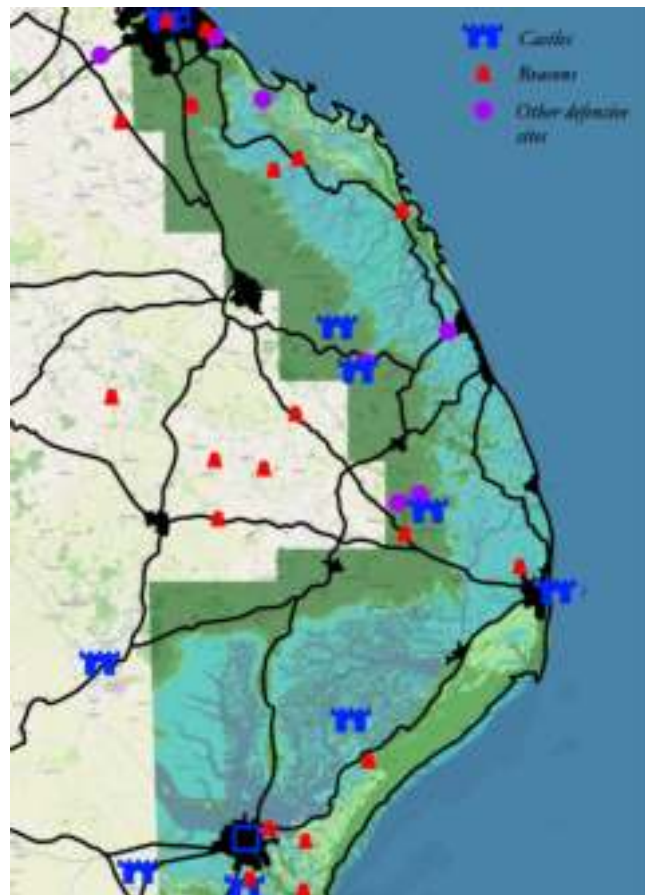


Figure 131: Distribution map of castles and other possible medieval defensive sites along the Lincolnshire coastline, along with potential early beacon sites (Modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

<sup>599</sup> See further Green, ‘Toote Hill and Cun Hu Hill’; Cox, ‘Pattern of Old English *burh*’, p. 42; and above, Section 2, on the Grimsby area.

<sup>600</sup> Cox, ‘Pattern of Old English *burh*’, pp. 42–6; W. Rodwell and C. Atkins, *St Peter’s, Barton-upon-Humber, Lincolnshire: A Parish Church and its Community* (Oxford, 2011), pp. 29–31.

<sup>601</sup> K. Cameron, *The Place-Names of Lincolnshire, Part 5: The Wapentake of Bradley* (Nottingham, 1997), p. 33.

<sup>602</sup> Based on a study of the early mapping data in this region, including the 1824 OS maps; Cameron’s *Place-Names of Lincolnshire 5* (pp. 44, 105, 156); I Bower, *The Place-Names of Lindsey (North Lincolnshire)* (University of Leeds PhD Thesis, 1940), pp. 54, 157, 450, 456, 479; Green, *Britons and Anglo-Saxons*, p. 159; and Baker and Brookes, ‘Signalling intent: beacons, lookouts and military communications’, p. 219 (map).

<sup>603</sup> On Anglo-Saxon Louth and its minster, see, for example, Green, *Origins of Louth*, pp. 59–93; Green, *Britons and Anglo-Saxons*, pp. xlvii–xlix, lxix, 62, 203–05; A. E. B. Owen, ‘Herefrith of Louth, saint and bishop: a problem of identities’, *Lincolnshire History and Archaeology* 15 (1980), 15–19; and P. Everson and D. Stocker, ‘“The Cros in the Markitte Stede”: the Louth Cross, its monastery and its town’, *Medieval Archaeology* 61 (2017), 330–71. With regard to the actual location of the Anglo-Saxon minster within modern Louth, see Green, *Britons and Anglo-Saxons*, p. lxix.



Figure 132: Boston in 1779, showing the line of the ‘Barditch’ around the eastern town, from Armstrong’s *Map of Lincolnshire* (Source: © The British Library Board, British Library Maps K.Top.19.19.5 tab.end).

(Welton le Marsh), and King’s Hill (Wrangle) all seem to be Norman earthwork castles, the first two having been recently re-dated to the late eleventh century.<sup>604</sup> Whilst it has been suggested that Castle Carlton is unlikely to have been intended for coastal defence, instead reflecting elite display, as its ‘viewshed’—the landscape visible from the top of the motte in all directions—in the immediate area of the castle is primarily western and northern, not eastern,<sup>605</sup> a further consideration of the evidence from Castle Carlton suggests that both may, in fact, be the case. Certainly, an examination of the non-immediate viewsheds of Castle Carlton and Toot Hill indicates that these sites could, in fact, have provided good views of Outmarsh and the coastline, whilst it is also worth noting that both are situated overlooking two of the major river valleys of the Lincolnshire east coast (which lie initially to their north). Indeed, the castle at Toot Hill has a name undoubtedly suggestive of the presence of an earlier element of coastal defence in this vicinity prior to the creation of the castle.<sup>606</sup> In addition to these definite castles, there may have been a castle at the drowned haven town of Skegness, based on medieval and sixteenth-century references to one,<sup>607</sup> and both of the major ports of Grimsby and Boston seem to have been equipped with earthen defences during the medieval period, named respectively the Burdike<sup>608</sup> and

<sup>604</sup> D. Wright *et al*, ‘Castle Carlton, East Lindsey, Lincolnshire’, in D. W. Wright and O. H. Creighton (eds), *Castles, Siegeworks and Settlements: Surveying the Archaeology of the Twelfth Century* (Oxford, 2016), pp. 26–39, for Castle Carlton and Toot Hill; Lincolnshire HER MLI43594 (Castle Hill, Welton-le-Marsh) and MLI10036 (Kings Hill, Wrangle); D. Roffe, ‘Medieval earthworks of south Lincolnshire’, online article, [www.roffe.co.uk/earthworksframe.htm](http://www.roffe.co.uk/earthworksframe.htm) (Introduction) and <http://www.roffe.co.uk/earthworks/castles/wrangle.htm> (‘Wrangle King’s Hill’), accessed 2021–2.

<sup>605</sup> Wright *et al*, ‘Castle Carlton’, p. 37

<sup>606</sup> The wider viewsheds of the castles were looked at via a modified version of Google Earth Pro’s viewshed tool, which indicates that Castle Carlton, Toot Hill and Castle Hill (Welton) all would have had good, wide views of the coastline.

<sup>607</sup> John Leland in the 1540s, shortly after the destruction of Old Skegness in the mid-1520s, reports that it was ‘an haven and a towne waulid having also a castelle’; the ‘walled town’ element is now generally thought to reflect the presence of a Roman-era fortified site, something supported by local place-name evidence, but the reference to a ‘castelle’ is less clear. It could simply be an alternative way of saying the same thing—Leland refers to Horncastle as both a walled town and ‘some hughe castel’, and Ancaster as a ‘fortress’ and a ‘castelle’, as Whitwell, *Roman Lincolnshire*, pp. 51–2, points out. However, it sounds like Leland meant that there was a castle here in addition to a walled town, and medieval minor-names and personal names from the Skegness area certainly include both names that contain the normal Old English word for a Roman town, *caestir/ceaster*, and names that contain the word ‘castle’, which might suggest that there was indeed a minor, otherwise-unrecorded castle at Skegness (like Toot Hill and King’s Hill?). So, the local manor court rolls mention a place named *Castellant* in October 1345 and a *Castelland Gote* in May 1444, whilst an ‘Alan at Castle’ is mentioned in 1291–2 and 1303 and a ‘John atte Castel’ in July 1313 (Massingberd, *Manor of Ingoldmells*, pp. 3–4, 6–9, 14, 21, 32–34, 116, 281–2).

<sup>608</sup> Cameron, *Place-Names of Lincolnshire* 5, p. 51; M. Osborne, *Defending Lincolnshire: A Military History from Conquest to Cold War* (Stroud, 2010), p. 50.

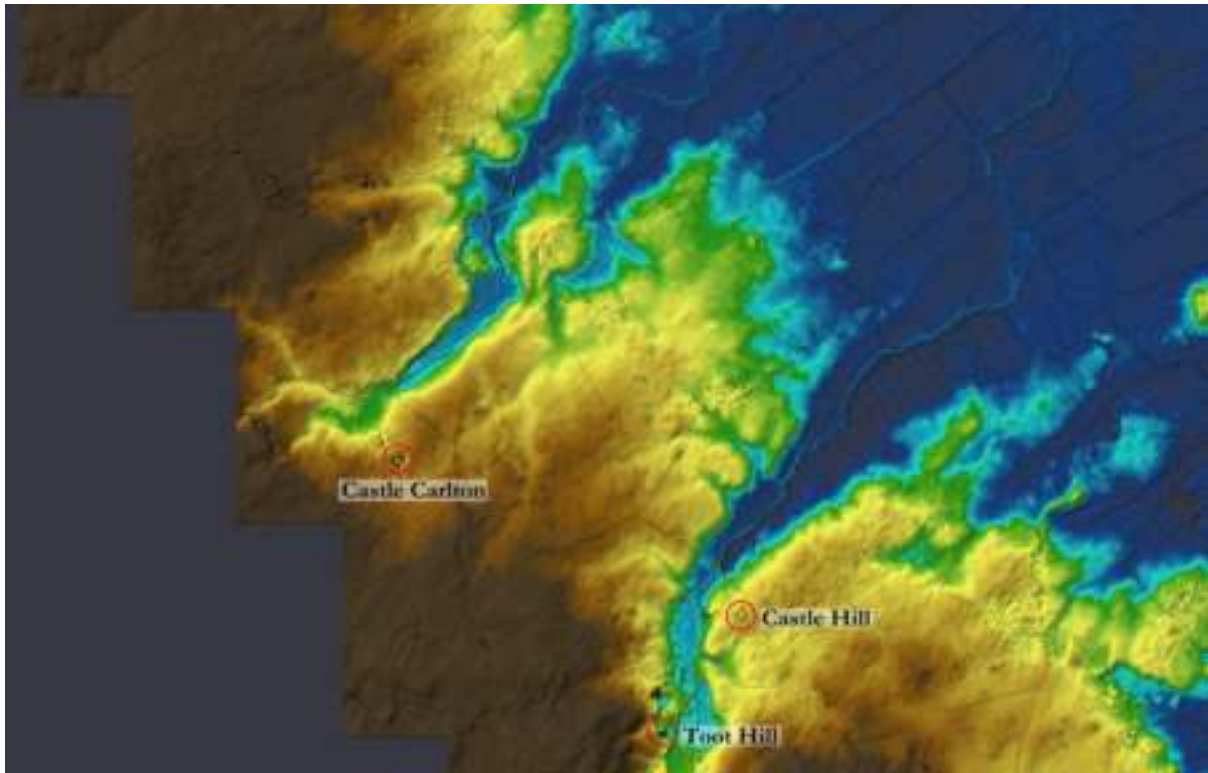


Figure 133: Lidar image of the area around Castle Carlton, Toot Hill and Castle Hill (Withern), adjusted to show the earthworks of these sites and the low-lying areas of the Outmarsh.

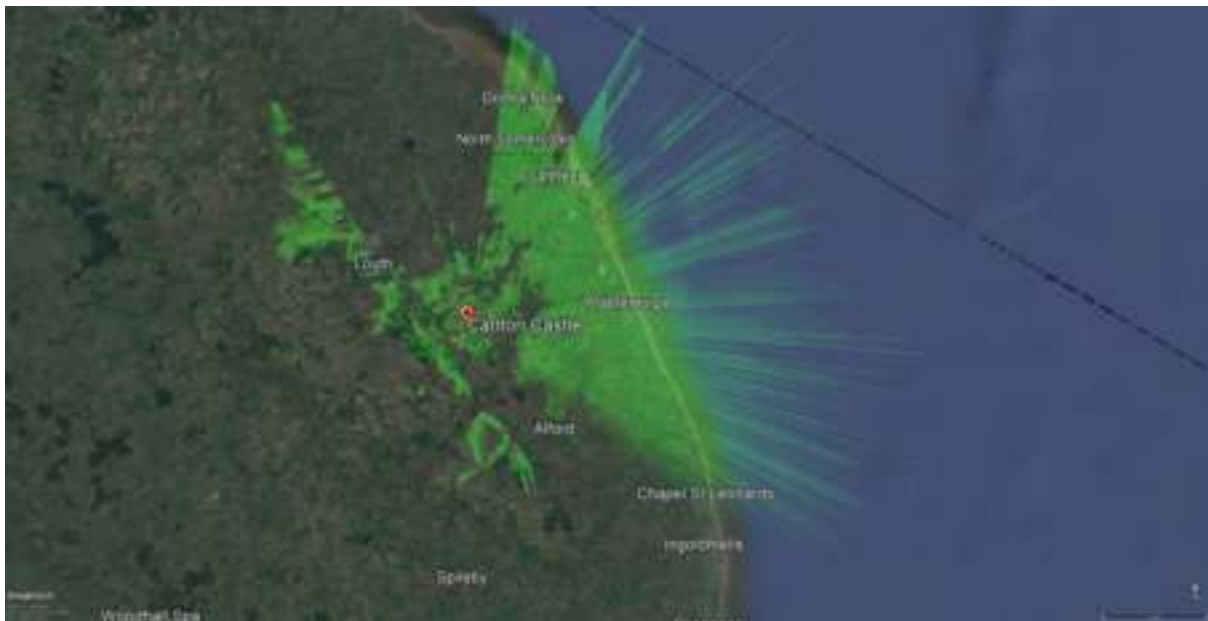


Figure 134: The wider 'viewshed' of Castle Carlton, calculated from head-height atop the motte, using an adjusted version of the viewshed tool in Google Earth Pro, which allows much wider approximate viewsheds to be calculated (Source: Google Earth Pro image and viewshed from 2022, Maps data © 2022 Google, Image © 2022 CNES/Airbus, Data SIO, NOAA, U.S. Navy, NGA, GEBCO, Image Landsat/Copernicus).

the Bardike/Barditch.<sup>609</sup> Medieval Boston is, in fact, called a *hiṣn*, a 'fortress, stronghold, entrenchment', rather than a *madīna*, a 'town, city',<sup>610</sup> by the Arabic geographer al-Idrīsī in the mid-twelfth century, who seems to have

<sup>609</sup> Rigby, *Grimby*, p. 14, first recorded c. 1160.

<sup>610</sup> Green, 'Al-Idrīsī's twelfth-century description and map of Lincolnshire'; A. F. L. Beeston, 'Idrisi's Account of the British Isles', *Bulletin of the School of Oriental and African Studies* 13.2 (1950), 265–80 at p. 277 n. 55 and Arabic text at p. 269, line 55; *Recueil de Voyages et de Mémoires Publié par la Société de Géographie: Géographie d'Édrisi*, ed. P. A. Jaubert (Paris,

had a good knowledge of the Lincolnshire coastline and its navigable waterways.<sup>611</sup> In this light, it is worth noting that the Bardike around Boston is indeed thought to date from the eleventh–twelfth centuries and has been interpreted in the past as a ‘defensive ditch’; needless to say, al-Idrīsī’s comment may well add further weight to this interpretation.<sup>612</sup> Finally, there were a number of more uncertain fortifications along the coastal zone, such as Castle Hill, Withern, whose deeply ditched defensive earthworks have often been thought to belong primarily to the Civil War era, but which may have been initially constructed in the twelfth century,<sup>613</sup> or Mablethorpe Hall. The lord of the latter, Thomas Fitzwilliam, was given a ‘licence to crenellate’ his manor here in December 1459, apparently due to its supposed vulnerable position ‘on the sea coast’, and the text is certainly suggestive, although whether the walls were ever built is uncertain:

Considering that the site of the manor of Thomas Fitz William, king’s squire, at Malberthorpe, co. Lincoln, where the said Thomas dwells, is on the sea coast, the king, of special grace, has granted to the said Thomas licence that he may put a ditch (*fossare*) to his manor and enclose the same with walls of ‘breke,’ stone and mortar (*muris de breke lapideis et c’clivinis*) and crenellate and embattle it, and make towers and fortresses [fortifications] there, and so hold it to him and his heirs.<sup>614</sup>

Such fortifications, whether meant primarily for defence from coastal raids or even just having the potential for this as one of several functions, were probably supplemented by a network of coastal warning beacons, just as the Anglo-Saxon forts were by ‘Toot Hills’. Various local place-names involving the word ‘beacon’ exist, along with a few sites said to have functioned as such. As can be seen from the map, these—like *tōt* names—have a decidedly coastal distribution, albeit one that spreads up onto the Wolds, presumably to enable communication with inland forces. Whilst some may be later in date, several were definitely used as coastal beacons from an early point. For example, Beacon Hill at Cleethorpes was the site of a beacon from at least 1377,<sup>615</sup> Beacon Hill

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1840), vol. 2, p. 425; H. Wehr, *A Dictionary of Modern Written Arabic*, ed. J. Milton Cowan, fourth edition (Wiesbaden, 1979), pp. 214, 1055.

<sup>611</sup> See above and Green, ‘al-Idrīsī’s twelfth-century description and map of Lincolnshire’, and see C. Loveluck, *Northwest Europe in the Early Middle Ages, c. AD 600–1150: A Comparative Archaeology* (Cambridge, 2013), p. 323, who accepts that al-Idrīsī ‘had visited England prior to his arrival in Sicily in c. 1138’.

<sup>612</sup> D. M. Owen, ‘The beginnings of the port of Boston,’ in N. Field and A. White (eds), *A Prospect of Lincolnshire* (Lincoln, 1984), pp. 42–5 at p. 43; N. Grayson, *Lincolnshire Extensive Urban Survey: Boston*, Historic England/LCC project no. 2897 (Lincoln, 2019), p. 5; Rigby, *Boston*, p. 14.

<sup>613</sup> Lincolnshire HER MLI43555, suggested to have its origins in the mid-twelfth century in Osborne, *Defending Lincolnshire*, p. 35.

<sup>614</sup> H. M. Lyte, C. G. Crump and W. R. Cunningham (eds), *Calendar of the Charter Rolls Preserved in the Public Record Office: Volume VI, 5 Henry VI – 8 Henry VIII, 1427–1516* (London, 1927), pp. 131–2; Mablethorpe Hall is Lincolnshire HER MLI98447. Note the reference to the licence being granted in consideration ‘that the site of the manor... is on the sea coast’ has been taken to imply a need for defence against ‘coastal pirates’ here: D. Williams, ‘Fortified manor houses’, *Transactions of the Leicestershire Archaeological and Historical Society* 50 (1974–5), 1–16 at p. 10, though see further C. Coulson, ‘Structural symbolism in medieval castle architecture’, in R. Liddiard (ed.), *Late Medieval Castles* (Woodbridge, 2016), pp. 199–219 at p. 219, who suggests such claims were often a fiction. In this context, it is worth noting the tradition recorded of the Fitzwilliam family and the ‘Old Hall’, Mablethorpe, in *White’s History, Gazetteer & Directory of Lincolnshire, 1872*, p. 264, that ‘a French ship landed a body of armed men, who carried off the heir of this family, and exacted such a large ransom that they were obliged to sell their estates in this neighbourhood’. Other possible fortifications along the Lincolnshire coastline include a lost *castelli de Grimesbi*, which Ralph of Bradley was paid £80 to provide materials for in 1200, although it would seem that it was never actually finished; *le Casteles* at Tetney, recorded first in 1451–3, though this is perhaps a jocular name for the former saltern mounds in this area(?); a *Castelle* at Cleethorpes, recorded in field-names from 1327 onwards, which is interesting given the local place-name evidence for a pre-Norman *burh* and *\*tōt-arn-hyll* here; and one or two possible medieval ringworks (Lincolnshire HER MLI42004 and the closely related MLI42078) at Willoughby and Claxby—see Cameron, *Place-Names of Lincolnshire* 5, pp. 31, 33, 34, 52–3, 153, and Section 2, above; Gillett, *Grimsby*, p. 10, on Grimsby Castle; and Ellis *et al* (eds), *Lincolnshire Marsh*, p. 178, on the identification of Dam Close, Willoughby (MLI42004), as a possible medieval ringwork.

<sup>615</sup> C. F. C. Hawkes, ‘Prehistoric Lincolnshire’, *Archaeological Journal* 103 (1946), 4–15 at p. 6.

at Marshchapel was known as *le Fyre bombe* in 1416 and *le firebeacon* in 1556,<sup>616</sup> payments for the *fyerbekyng* (firebeacon) at Saltfleet Haven are recorded in the Louth parish book in 1542,<sup>617</sup> and the firebeacon at Candlesby is recorded in the later sixteenth century.<sup>618</sup>

In the post-medieval period through to the eighteenth century, there seems to have been little real improvement in terms of coastal warning and defence systems. The medieval castles and fortifications had all long since fallen out of use and favour, although Boston had seen earthwork entrenchments made around it during the Civil War.<sup>619</sup> Certainly, at the time of Third Anglo-Dutch War in the 1670s, shipping seems to have simply stayed in port due to threat of offshore Dutch privateers, and the tales we have of resistance to these privateers suggest that much coastal defence fell to the local inhabitants, although some trained infantry and cavalry were available.<sup>620</sup> By the Napoleonic War, in the early nineteenth century, the main coastal defence was once again a system of beacons, albeit an updated system involving signals and flags that was supplemented by inland military forces (Volunteer Corps) who could react to these.<sup>621</sup> Furthermore, plans were made for the evacuation of the citizenry of Grimsby and other settlements in carts and waggons if the enemy landed, with orders that those undertaking this evacuation should then destroy what infrastructure they could behind them.<sup>622</sup> In 1803, when the beacon system was tested for intervisibility, guns were fired from the Signal Stations at Cleethorpes cliff and Saltfleet harbour, with flags first raised and then, after nightfall, the beacons lit,<sup>623</sup> and a viewshed analysis suggests that claims that a beacon at Seacroft, Skegness, could communicate with Lincoln via only the single intermediary beacon on the Wolds at Nab Hill, Fulletby, are probably correct.<sup>624</sup> The issue with this system was, of course, the potential for false alarms from fires set accidentally or otherwise, and in April 1804 those doing so deliberately were warned that they would be prosecuted ‘with the utmost rigour of the law’, as the false alarms and consequent call-outs for the Volunteers Corps were causing ‘much inconvenience’.<sup>625</sup>

## The First and Second World Wars

The first notable upgrades to the coastal defences came in the mid-nineteenth century, when fears of French invasion in the late 1850s and 1860s inspired the formation of new rifle and artillery volunteer units and the establishment of a battery on Cleethorpes cliffs.<sup>626</sup> However, the First and especially the Second World War saw far more dramatic developments. The former saw the foundation of the two great Humber Mouth forts, Haile

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<sup>616</sup> K. Cameron, *The Place-Names of Lincolnshire, Part 4: The Wapentakes of Ludborough and Haverstoe* (Nottingham, 1996), pp. 114–15.

<sup>617</sup> R. S. Bayley, *Notitiae Ludaie; or, Notices of Louth* (Louth, 1834), p. 49.

<sup>618</sup> Simmons, *Fen and Sea*, p. 112. Interestingly, Toote Hill at Little Coates, Grimsby, was also used as a beacon c. 1800, just as it probably was in the Viking-era (Kaye, *Grimsby*, p. 113). With regard to the other potential early beacons mapped in fig. 131, these include a fire-beacon shown on Captain Armstrong’s 1779 *Map of Lincolnshire* at Fulstow, where the inn known as the ‘Sign of the Fire Beacon’ was in 1817 and after (*Stamford Mercury*, 8 August 1817, p. 2, aka the Ship Inn, recorded from at least 1806), and a number of beacons mapped on the early OS maps, e.g. Lincolnshire HER MLI12802 (Possible beacon, Old Leake) and MLI12723 (Look-out mound, Fishtoft).

<sup>619</sup> Osborne, *Defending Lincolnshire*, p. 93.

<sup>620</sup> Daniell (ed.), *Calendar of State Papers: Charles II, 1672*, pp. 408, 424; Garner, *Boston, Politics and the Sea, 1652–1674*, p. 35; Kime, *Skegness*, p. 127; Osborne, *Defending Lincolnshire*, pp. 97–8.

<sup>621</sup> Osborne, *Defending Lincolnshire*, pp. 99–103.

<sup>622</sup> *Stamford Mercury*, 2 March 1804, p. 1; D. Kaye, *The Book of Grimsby: The Story of Borough, Town and Port* (Buckingham, 1981), p. 113. The plans called for an evacuation followed by an attempt to ‘destroy or render totally useless all Boats, Barges, Waggons, Carts, Cars or other Carriages, Horses, Cattle, Sheep, Hay, Straw, Corn, Meal, Flour, or Provisions of any kind; and also any House, Mill, Bridge, or other Building, or any matter of thing whatsoever which may be of advantage to an Enemy, and that cannot be removed’ (*SM*, 2 March 1804, p. 1).

<sup>623</sup> *Stamford Mercury*, 4 November 1803, p. 2. This report lists the Napoleonic-era signals and beacons as being located at ‘Clee-Cliff, Marsh Chapel, Dorma Nook (Grainthorpe), Saltfleet, Mablethorpe, Sutton, Anderby Creek, Ingoldmells Point, Skegness, and Gibraltar’.

<sup>624</sup> Kime, *Skegness*, p. 127, tested using a modified version of Google Earth Pro’s viewshed tool.

<sup>625</sup> *Stamford Mercury*, 13 April 1804, p. 1.

<sup>626</sup> See, for example, *Sheffield Independent*, 17 July 1869, p. 9; Osborne, *Defending Lincolnshire*, pp. 109–10.

Sand Fort and Bull Sand Fort, in 1915, although they were completed too late to be of much use in that conflict, as well as a partial system of coastal concrete pillboxes, with the surviving remnants of these concentrated mainly around Saltfleet Haven to Donna Nook.<sup>627</sup> In addition, several air bases were established, the most notable of which was at RAF North Coates,<sup>628</sup> and cavalry and cyclist units were deployed along the coast, at Skegness, Burgh-le-Marsh, Sutton-on-Sea, Chapel St Leonards and Grimsby.<sup>629</sup> An army base was also established at



Figure 135: The two great Humber Mouth forts, Bull Sand Fort (left) and Haile Sand Fort (right), with Spurn Point in the background; begun in 1915, they were completed too late to be of much use in the First World War but were used in World War Two.



Figure 136: A First World War pillbox at Sea Lane, Saltfleet, probably built in 1917. This forms part of an organised system of coastal defence, with pillboxes placed in this area at regular intervals. It had a convex curved roof at least 1m thick and sandbag shuttering as part of an attempt to make it resistant to naval bombardment. It was probably manned by soldiers of the 7th/8th Battalions of the Sherwood Foresters in World War One; at the outbreak of the Second World War, the pillbox was reoccupied and integrated into the new anti-invasion defence, and it is now a Grade II listed building, no. 1445089.

<sup>627</sup> Osborne, *Defending Lincolnshire*, pp. 121–2, 146.

<sup>628</sup> Robinson, *Lincolnshire Seaside*, p. 147; D. N. Robinson, ‘The changing coastline’, in D. Mills (ed.), *Twentieth Century Lincolnshire* (Lincoln, 1989), pp. 155–80 at p. 169; Osborne, *Defending Lincolnshire*, pp. 127–8; T. Brigham and D. Jobling, *Rapid Coastal Zone Assessment, Yorkshire and Lincolnshire: Bempston to Donna Nook, Phase 2* (Hull, 2011), part 2 (Gazetteers and Maps), pp. 238–9.

<sup>629</sup> Osborne, *Defending Lincolnshire*, p. 121.

Humberston Fitties by the 3<sup>rd</sup> Battalion Manchester Regiment, with the huts they put up forming the basis of the chalet camp that has flourished there since the inter-war years.<sup>630</sup>

The changes wrought by the Second World War were far more extensive, with an all-encompassing ‘Coastal Crust’ of anti-invasion devices, including pillboxes, gun emplacements, mines and anti-tank cubes, found all along the coast from Grimsby to Boston, as well as inland from these (fig. 137).<sup>631</sup> Key coastal artillery batteries were established at Grimsby Docks, Theddlethorpe (Crook Bank), Mablethorpe, Ingoldmells (Jacksons Corner), Gibraltar Point and Freiston Shore, as well as guns being returned to the Humber Forts and mobile train-mounted artillery provided.<sup>632</sup> Although most airbases were inland of the Lincolnshire coastal marshes, there were two in the Outmarsh at North Coates and nearby Donna Nook, and there were a significant number of radar stations established along the coast too.<sup>633</sup> In terms of the marsh landscape, a large number of anti-aircraft

trenches were dug to prevent enemy landings, especially in the region from Mablethorpe northwards. Although much of this infrastructure and defence architecture was removed or decommissioned in the post-war era, involving significant effort in terms of the Coastal Crust by the County Council after 1945, large elements continue to persist along the northern Lincolnshire coast and can still be seen on beach visits today, as can the Humber forts be too.

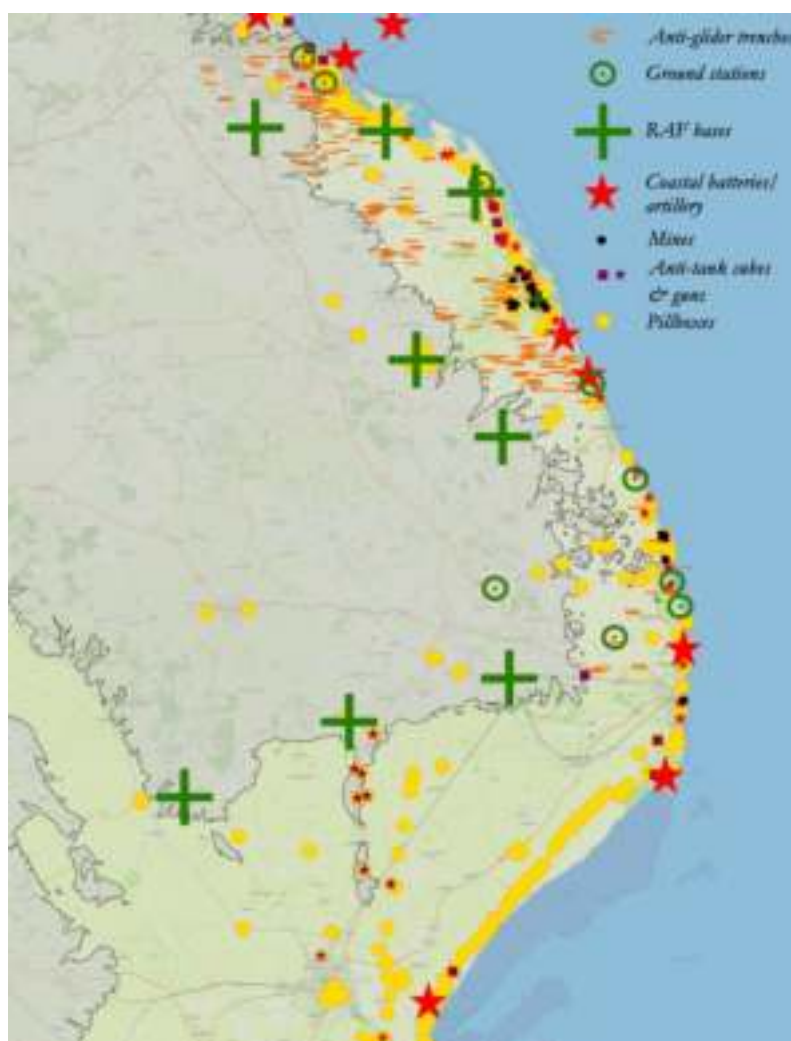


Figure 137: The distribution of elements of the Second World War ‘coastal crust’ along the Lincolnshire coastal zone, showing the 3m contour inland of the Outmarsh/Low Grounds (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

<sup>630</sup> Robinson, ‘Changing coastline’, p. 166.

<sup>631</sup> The depiction of the elements of the ‘Coastal Crust’ in fig. 137 is derived from the records of the Lincolnshire HER; the CITiZAN interactive coastal map (<https://citizan.org.uk/interactive-coastal-map/>) (accessed 2021–2); Matt Aldred and Steve Thompson’s *eDoB Online* (ver 18.6), <https://edob.mattaldred.com/> (accessed 2022); Osborne, *Defending Lincolnshire*; and T. Hancock, ‘The RAF in Lincolnshire’, in S. Bennett & N. Bennett (eds), *An Historical Atlas of Lincolnshire* (Hull, 1993), pp. 130–1.

<sup>632</sup> Kime, *Lincolnshire Seaside*, p. 128; Osborne, *Defending Lincolnshire*, pp. 178–83, 187–9, 190, 204–07; Robinson, *Lincolnshire Seaside*, p. 149; Robinson, ‘Changing coastline’, p. 170.

<sup>633</sup> Osborne, *Defending Lincolnshire*, pp. 212–17; Robinson, ‘Changing coastline’, p. 170; Hancock, ‘The RAF in Lincolnshire’; Brigham and Jobling, *Rapid Coastal Zone Assessment*, part 2, pp. 238–9.



## 8 Inns and the Landscape of the Lincolnshire Coast

### Introduction

The place of inns within the Lincolnshire coastal zone is, of course, a topic of considerable interest to the present study, and it is worth concluding with a final section that gathers together the key threads relating to alehouses and inns in the landscape that have emerged from the preceding analysis. In particular, it can be argued that the inns and alehouses of the Lincolnshire coastline are of considerable potential interest from a landscape history perspective—some of them, especially the more ancient, seem to ultimately reflect the landscape of creeks and ports that existed here prior to the seventeenth century, whilst others can be suggested to have actually had an active and crucial role in creating the subsequent resort landscape of the coastal strip which persists to today.

### Reflecting the landscape: ports and the earliest Inns on the Edge

The earliest indications of the existence of inns and other drinking establishments in the landscape of the Lincolnshire coastal zone come from the medieval period, and particularly from the major medieval ports of the coastline. In Boston, for example, the 1327, 1332 and 1340 taxation returns include several people with surnames such as Taverner and Typeler, something that is true for Grimsby in this period too, with these names probably reflecting the services that these people provided as tavern-keepers and ale-retailers/tapsters, given that surnames were not yet fully hereditary at this point.<sup>634</sup> Likewise, the various records of immigrants living in late medieval England list three brewers of non-English origin present in Boston during the 1430s–50s, including Nicholas Johnson and Peter Taillour (both said to be ‘Hollanders’), as well as a number of resident aliens thought to be inn-keepers and/or brothel-keepers with nick-names like ‘Gode for Eve’, ‘Long Grete’, ‘Blaak Margaret’ and ‘Flemish Lysbet’, whilst in Grimsby there is the documented case of Robert de Eynesham, burgess and tavern-keeper of Grimsby, who ‘feloniously broke out of gaol’ in the late fourteenth century.<sup>635</sup> Needless to say, the presence of taverns and tavern-keepers in the major medieval ports of Lincolnshire is perhaps unsurprising. Boston, in particular, was exceptionally prosperous in this period—by the thirteenth century, it was the most important port in England for the shipment of wool, England’s premier export, and was second only to London in the scale of its overseas trade.<sup>636</sup> In this light, it is worth recalling the contemporary words of Richard of Devizes on late twelfth-century London, who indicates that taverns were an expected part of port life in this era, just as they were later:

You will arrive in London. Behold, I prophesy to you: whatever evil or malicious thing that can be found in any part of the world, you will find it in that one city. Do not associate with the crowds of pimps; do not mingle with the throngs in the eating-houses; avoid dice and gambling, the theatre and the tavern.<sup>637</sup>

Certainly, we have a number of names of inns in Boston recorded from the end of the medieval period or the very early post-medieval period, such as the Red Lion Tavern in Bargate, first mentioned in 1515; the Crown in

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<sup>634</sup> See Rigby, ‘Medieval Boston’; Rigby, *Medieval Grimsby*, p. 18. As P. Hanks, R. Coates and P. McClure, *The Oxford Dictionary of Family Names in Britain and Ireland: Volume 1, Aaron–Cushing* (Oxford, 2016), note, hereditary surnames only really become common in the towns and boroughs by the late fourteenth century in the Midlands, and many surnames ‘still meant what they said as late as the 15th century and beyond’, *i.e.* they continued to reflect the job of bearer (pp. xxiv–xxv).

<sup>635</sup> E. G. Kimball, *Records of Some Sessions of the Peace in Lincolnshire, 1381–1396, II: The Parts of Lindsey* (Lincoln, 1962), p. 53; J. Mackman, ‘Lincolnshire’, *England’s Immigrants 1330–1550: Resident Aliens in the Late Middle Ages*, online resource, <https://www.englishimmigrants.com/page/sources/alien-subsidies/the-east-midlands/lincolnshire>, and the online ‘England’s Immigrants 1330–1550 Database’ at <https://www.englishimmigrants.com/> (both accessed 2021–2).

<sup>636</sup> Rigby, *Boston*, pp. 1–3, 33–4.

<sup>637</sup> J. T. Appleby (ed. and trans.), *Chronicle of Richard of Devizes of the Time of King Richard the First* (London, 1963), p. 65.

the Market-place, first mentioned in 1516; the Ram, the Bell, the White Hart, the Saracen's Head, the White Horse, the Rose, and the Sword, all of which are mentioned in 1564; and, only slightly later, the Green Hinde/Dragon (1590) and the Falcon (1611), though the latter at least is thought to date back to the sixteenth century or before.<sup>638</sup> Whether these inns were in existence prior to the sixteenth century is, of course, uncertain, but it seems very likely that at least some, if not the majority, of them were.<sup>639</sup>

As to the more minor ports of the Lincolnshire coastline, it is probable that these too had their inns and ale-houses in the late medieval and early post-medieval period—the best evidence here comes from the medieval court rolls of the Manor of Ingoldmells, which covered part of the southernmost Lincolnshire Marsh including Old Skegness, reportedly a 'great haven town' and 'a good port'.<sup>640</sup> The court rolls refer to multiple brewers/brewsters and tippers—ale-sellers/alehouse-keepers, who sold ale but did not brew it<sup>641</sup>—within the area of its jurisdiction, who came before it usually because they had acted contrary to the 'assize of beer/ale', a set of regulations specifying the quality, prices and measures to be used.<sup>642</sup> In April 1313, for example, there were two tippers up before the court, along with twenty-one brewsters, whilst the records refer to seven tippers in October 1330 and eleven in May 1346, along with sixteen who had 'brewed and sold beer contrary to the assize'.<sup>643</sup> Only occasionally do we get the specific locations within the manor associated with these people, but a Robert May—who was before the manor court with three others for

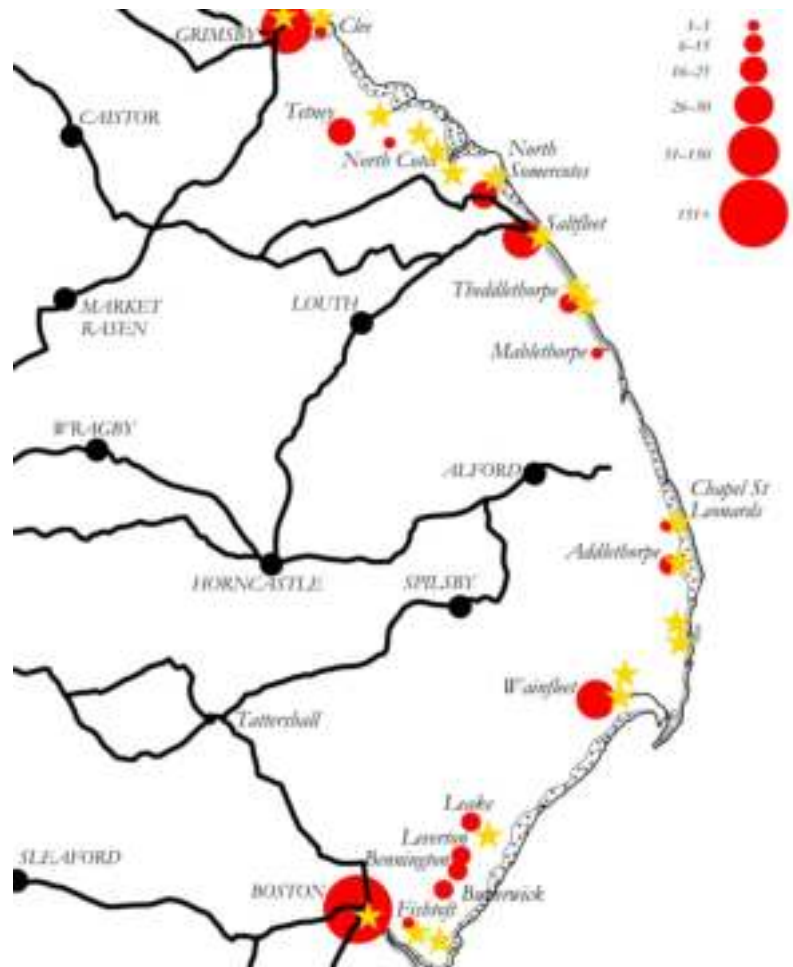


Figure 138: The distribution of inns and alehouses along the Lincolnshire coast in 1686, based on the proxy measure of spare beds and stabling places (red), mapped against the recorded sixteenth- to seventeenth-century ports and havens. The background map shows both roads recorded on maps of the seventeenth to mid-eighteenth centuries and the eighteenth-century coastline, after Armstrong's 1779 map of Lincolnshire.

<sup>638</sup> Thompson, *History and Antiquities of Boston*, pp. 206–08, 212, 220, 223, 257–9, 271

<sup>639</sup> Compare here the Saracen's Head/Turk's Head at Louth, which would be first recorded in the sixteenth century—in 1536—if it were not for the chance survival of John Louth's will of 1459 that happens to mention it: C. Green, *The Streets of Louth: An A–Z History* (Louth, 2014), p. 9.

<sup>640</sup> Hearne (ed.), *Itinerary of John Leland*, vol. 7, p. 152; Hughes, 'Roger of Howden', p. 589. The jurisdiction of this manor extended over six parishes, although it did not include all of the area of these; rather, it included the greater part of Ingoldmells and Addlethorpe, virtually all of Skegness, part of Burgh-le-Marsh, a small area of Great Steeping (rarely mentioned in the court rolls), and a very small element of Partney (never mentioned in the rolls, but for which 32<sup>d</sup> was paid in rent at the end of the thirteenth century): Massingberd, *Manor of Ingoldmells*, pp. xiv–xv.

<sup>641</sup> J. M. Bennett, *Ale, Beer, and Brewsters in England: Women's Work in a Changing World, 1300–1600* (Oxford, 1996), pp. 20, 45

<sup>642</sup> Bennett, *Ale, Beer, and Brewsters*, pp. 4, 21, 99–101.

<sup>643</sup> Massingberd, *Manor of Ingoldmells*, pp. 31, 109, 111, 123.

the ‘tippling of beer’—is explicitly stated to be ‘of Skegness’ in April 1343, as would seem to be Robert Ffoular Jnr and four others who were presented to the court by Skegness in October 1374 for brewing and selling bear contrary to the assize.<sup>644</sup> It is also interesting to note that some of these ale-retailers, such as John son of Alan and two others in October 1345, are said to have been brought up ‘because they had no signs for selling beer’, implying that this was the normal expectation, as it was also in July 1419, when the wife of Robert Herryson was before the court for not being willing to ‘expose the sign called Alestake’.<sup>645</sup>

By the seventeenth century, the ports and havens of the Lincolnshire coast—from the largest to the smallest—were suffering from serious decline, as has been discussed previously. Nonetheless, when we get our first reasonably comprehensive look of the distribution of inns in the latter part of that century, it shows a good correlation between the locations of inns and the medieval/post-medieval ports of the coastal zone. This evidence comes from the Spare Beds and Stabling Survey of 1686, which gives details of the number of spare beds and stabling places available in inns and alehouses across the whole of England and Wales.<sup>646</sup> As can be seen from the map (fig. 138), the four largest concentrations of inns and alehouses recorded via this proxy measure along the Lincolnshire coastal zone are found in just those four locations—Boston, Grimsby, Saltfleet and Wainfleet—where the most important late medieval and immediately post-medieval ports and havens were situated, whilst no significant inns/alehouses are recorded from the area of Skegness, which is unsurprising given the sixteenth-century loss of the port to the sea here.<sup>647</sup> Furthermore, the smaller concentrations of spare beds and stabling places also match up reasonably well with the known minor sixteenth- to seventeenth-century ports and havens of the coastline, as discussed above—so, inns are recorded at North Somercotes, Theddlethorpe, Old Leake and Fishtoft amongst other places, all of which had active creeks and havens close-by, but none are recorded from Huttoft, Anderby or Sutton, for example, which did not.<sup>648</sup> In other words, the evidence of the Spare Beds and Stabling Survey of 1686 strongly suggests that the distribution of the more important inns and alehouses along the seventeenth-century Lincolnshire coastal zone closely reflected the locations of the recorded ports and havens of this region, with these in turn having an intimate connection to the former great creeks of the medieval and earlier coastal marshes.

With regard to specific examples of inns outside of Boston and Grimsby that reflect the pre-eighteenth-century landscape of ports and creeks in this manner, the most obvious place to start is Saltfleet Haven. This has the third highest number of spare beds and stabling places in the coastal zone, and the inns recorded here clearly cluster around the medieval port and harbour site that is still identifiable here (fig. 139). For example, the New Inn, formerly the Old Inn, not only has roots that go back to at least the mid- to late seventeenth century and perhaps to the Tudor era, but also actually overlooks the medieval harbour site.<sup>649</sup> Furthermore, in

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<sup>644</sup> Massingberd, *Manor of Ingoldmells*, pp. 113, 164.

<sup>645</sup> Massingberd, *Manor of Ingoldmells*, pp. 116, 240; see Bennett, *Ale, Beer, and Brewsters*, pp. 21, 98, 140.

<sup>646</sup> TNA, WO 30/48; this is a huge document, with over 11,000 lines of data, and my thanks are due here to Dr Jacob Field for sharing the results of his transcription and digitization of the sections of this document relating to the Lincolnshire coastline with me, created as part of the Online Atlas of the Occupations Project undertaken by the Cambridge Group for the History of Population and Social Structure, University of Cambridge: ‘The survey of spare beds and stabling of 1686’, *Online Atlas of the Occupations Project*, <https://www.campop.geog.cam.ac.uk/research/projects/occupations/onlineatlas/1686beds.html> (accessed 2022).

<sup>647</sup> Boston had 186 guest beds and 350 spare stabling places; Grimsby, 70 and 53; Skidbrooke with Saltfleet, 15 and 35; and Wainfleet, 9 and 28 (TNA, WO 30/48; J. Field, *pers. comm.*).

<sup>648</sup> Theddlethorpe, for example, was the home to both Wilgrip Haven and a separate Theddlethorpe Haven at the end of the sixteenth century, and had 6 spare beds and 8 spare stabling places; North Somercotes, which was next to Grainthorpe Haven and also seems to have had its own haven at ‘Southolle’, had 13 spare beds and 8 spare stabling places; and Old Leake, which had a significant haven and apparently a lighthouse well inland of the current coastline at one point in the Early Modern period, perhaps located near the Ostrich Inn on the Leake/Leverton parish boundary, had 8 spare beds and stabling for 7 horses, with a further 3 of each at Leverton (TNA, WO 30/48; J. Field, *pers. comm.*).

<sup>649</sup> Sturman, ‘Saltfleet and the New Inn’; Pawley, *Lincolnshire Coastal Villages*, p. 238.



Figure 139: Detail of Saltfleet Haven, based on the 1838 Tithe Map of Skidbrook-cum-Saltfleet, showing the probable area of the documented late medieval to early modern harbour and staithe (landing-stage or wharf) and the position of the inns in relation to this. Also depicted are the courses of the creeks in the first half of the nineteenth century, the area of probable medieval tenements, and ‘the Coal Green’, which lay to the south of the harbour and may indicate the area where colliers once beached to unload their cargoes.



Figure 140: The landscape around the mouth of the ‘port of Schalflet’, as shown in the 1842 Ingoldmells Tithe Map, with banks in orange—The Old Hotel was situated just behind the medieval Dudic Bank at the mouth of this major creek, and was almost certainly present in 1779. It may also be mentioned in the reign of Charles I and is perhaps responsible for at least some of the spare beds and stabling places recorded in 1686 from Addlethorpe, given the complexity and changing nature of the parish boundaries here, as well as the interconnected history of Addlethorpe and Ingoldmells parishes.

1828–9, it was one of four inns in Saltfleet—the New Inn (William Towriss), the Rodney (Jesney Fields), the Ship Inn (George Thomas Palmer), and the Crown (Mary Risdall)—all of which are likely to have been in place from at least 1792, as the same number of inns are recorded in Saltfleet then.<sup>650</sup> Importantly, the other three inns similarly cluster around the late medieval harbour area, with the Rodney and the Crown inns both partly on the main east–west road where the havenside messuages and tenements seem to have been located, as in 1334 when Walter Randman and his family had ‘a messuage in the vill of Skidbrooke at Saltfleethaven’ and ‘a plot of land there 32 feet by 16 feet, butting south on the harbour’.<sup>651</sup>

Similarly intriguing is the location of ‘The Old Hotel’ at Ingoldmells, which stood immediately behind the medieval Dudic Bank at the point where the medieval ‘port of Schalflet’, and perhaps the sixteenth-century Ingoldmells Haven, once met the sea. This building is marked on the 1819 OS draft map of the area, as well as on the published OS original series map of 1824 and the 1842 tithe map of Ingoldmells. References to it are relatively rare, but it was being used as a Bathing House in June 1841 by William Cox, having been previously used for this by William Epton, and was described then as containing ‘2 Sitting-rooms, and 3 Bed-rooms (making up 4 beds), with Stabling for 4 horses’, whilst the beerhouse of John Blaides, recorded in 1856, was probably here too, in the building immediately to the west of the main hotel.<sup>652</sup> However, The Old Hotel is probably rather more interesting than all this would imply. Looking prior to the nineteenth century, Captain Armstrong’s *Map of Lincolnshire* of 1779 marks an inn named the Red Lion at what seems to be this spot, indicating that ‘The Old Hotel’ was indeed an inn prior to its reuse as a bathing hotel-cum-beerhouse in the nineteenth century, and it is possible that the Red Lion/Old Hotel was the probable inn known as ‘Watson’s house’ that was situated on the coast at Ingoldmells in June 1623.<sup>653</sup> Other potentially relevant inns which seem to have been sited with respect to pre-modern havens and ports might include the former Ostrich Inn, on the Leverton/Leake parish boundary, which was located at the head of Leake Haven as reconstructed by Hallam (fig. 87),<sup>654</sup> and perhaps the Ship Inn at Theddlethorpe. The latter was definitely in existence by 1798 and is not only located close to Oliver’s Gap, which seems to have been a post-medieval trading site (fig. 45), but also between and close to the post-medieval Balack/Theddlethorpe Haven and Wilgrip Haven.<sup>655</sup> The Ship at Winthorpe/Skegness is also worth noting; although no spare beds or stabling was available in either parish in 1686, the original Ship Inn was

<sup>650</sup> Lincolnshire Archives LQS/D/9/1/9; *Pigot and Co.’s National Commercial Directory 1828–9* (London, 1828), p. 550.

<sup>651</sup> Pawley, *Lincolnshire Coastal Villages*, p. 320.

<sup>652</sup> *Stamford Mercury*, 11 June 1841, p. 3; W. White, *History, Gazetteer, and Directory of Lincolnshire* (Sheffield, 1856), p. 527. It appears in the 1841 census as ‘Hotel’, with William and Jane Cox (both aged 30) being resident there, along with a Martha Prior, 55, of independent means; in 1851, it was again listed as two residences under the title The Old Hotel, one occupied by a clergyman named William Du’Pre and his family, along with a groom and housemaid, and one by the family of Robert Laughton, labourer. The Blaides beerhouse of 1856 was presumably in the property occupied by Joseph Blades marked immediately to the west of The Old Hotel on the 1842 tithe map/apportionment.

<sup>653</sup> Captain Andrew Armstrong’s *Map of Lincolnshire*, published 20 January 1779, British Library Maps K.Top.19.19.5 tab.end; W. Dugdale, *The History of Imbanking and Drayning of Divers Fennes and Marshes* (London, 1662), pp. 166–7. ‘Watson’s house’ was located in Ingoldmells by the sea-bank that ran from Hogsthorpe, which fits well with the location of the Red Lion/Old Hotel and the organisation of the parish boundaries around the mouth of the Schalflet prior to the mid-nineteenth century. Note, the formula ‘X’s house’ or ‘the house of X’ occurs frequently as a way of referring to inns prior to the early nineteenth century, appearing to be more common than using the inn’s name, at least in the archives of the *Stamford Mercury*; for an earlier version of this, see perhaps the early sixteenth-century ‘Laws for the Little Lymn’, which describes the course that the Little Lymn river currently follows—the river travels past ‘Croft hall garthe’ (the medieval Croft Manor) and then down to ‘oke bridge’ (Oak Bridge, marked on the current OS 1: 25,000 map and the 1906 Six Inch map), ‘kitloke howsse’, and ‘grene hadyke’ (Simmons, *Fen and Sea*, p. 155). The latter feature is believed to be represented by Croft Lane (*Ibid.*, p. 156), which means that ‘kitloke howsse’ must lie at the north end of Croft Lane and after Oak Bridge, which just so happens to be exactly where the Old Chequers Inn was located, according to the 1906 OS Six Inch map (the surviving building is Lincolnshire HER MLI93367 and Kitlock is a local surname in use in the sixteenth century).

<sup>654</sup> Hallam, *Settlement and Society*, pp. 72–5.

<sup>655</sup> Lincolnshire Archives LQS/D/9/1/5/27, when Joseph Ryley was the licensee; the inn here was subsequently run by Elisha Ryley (1807–11), Thomas Ryley (1812), and William Benskin (1813 onwards).

certainly in existence by 1792 at the latest and sits at the inland end of the new, mid-sixteenth- to early eighteenth-century Skegness haven, which is curious to say the least, suggesting it may have its origins in a local alehouse serving this minor port that didn't offer beds or stabling and so avoided recording in 1686.<sup>656</sup>

## Creating the landscape: bathing inns and the origins of the resort coastline

Whilst the earliest 'Inns on the Edge' thus seem to ultimately reflect the landscapes that had existed all along this coastline from the medieval period through to the seventeenth century, some of those that came afterwards appear to have played a central role in creating a wholly new landscape in this region. The key inns here are the Georgian bathing inns of the eighteenth and earlier nineteenth centuries, which were established at Skirbeck, Boston Scalp/Fishtoft, Freiston, Skegness, Ingoldmells, Sutton, Mablethorpe, Saltfleet and Cleethorpes (fig. 96). These establishments were often well-appointed inns, designed to cater for the wealthier, genteel elements of society who wished to partake of the new fashion of sea-bathing. For example, Cleethorpes, where the Dolphin Inn/Cleethorpes Hotel was founded around 1760, was declared in 1805 to be 'the resort of much genteel company, it being universally allowed to be the most eligible and agreeable bathing place on the Lincolnshire coast',<sup>657</sup> whilst Skegness—where the Vine was established in about 1772—was declared in 1779 to be 'a Place very much resorted to by Ladies and Gentlemen for Sea Bathing, where there is a safe and convenient Shore; together with every other Accommodation suitable for that Purpose'.<sup>658</sup>

As has been discussed previously, these bathing inns seem to have formed the seeds from which a wholly new urban and resort landscape grew up along the coastal strip of Lincolnshire. Where previously, there were only thinly dispersed settlements or hamlets, by the mid-nineteenth century small resorts had started to emerge.



Figure 141: A busy beach at Mablethorpe, with bathing caravans and a three-masted ship in the background; from an early twentieth-century postcard.

<sup>656</sup> On the post-medieval haven at Skegness, built after the destruction of the port of Old Skegness, see Section 2, above, and figs 27 and 28; for the Ship Inn in 1792, see Lincolnshire Archives LQS/D/9/1/3/23, when it was run by Thomas Hutton—it was still run by him in 1823, when the alehouse recognizance of that year names it as 'The Ship, Winthorpe' (Lincolnshire Archives LQS/D/9/1/3/375).

<sup>657</sup> C. Cooke, *Topographical and Statistical Description of the County of Lincoln* (London, 1805), p. 107.

<sup>658</sup> *Stamford Mercury*, 22 April 1779, p. 4.

At Cleethorpes, there was only really the hamlet of Oole, with a single bathing inn—The Dolphin—and two or three lodging houses, at the start of the nineteenth century, but by the 1850s two further bathing inns and 106 lodging houses had been established here and the resort was catering for over a thousand visitors at a time (fig. 72).<sup>659</sup> At Mablethorpe, there was very little by the sea where the town centre is now in the early nineteenth century other than The Book in Hand inn, which was established by 1792 and known at first as the Mablethorpe Hotel or Sign of the Castle. However, by the middle of the century a small resort had likewise grown up around this inn, with several new inns and beerhouses established at Mablethorpe by the late 1860s: in July 1855, the place was said to be ‘full of visitors to overflowing’, and several thousand visitors arrived on a single day in 1871 (see fig. 38).<sup>660</sup> Sutton-on-Sea, then Sutton-in-the-Marsh, similarly seems to have had its origins in one or more bathing inns established apparently well away from other buildings and close to the dunes, in this case Sutton

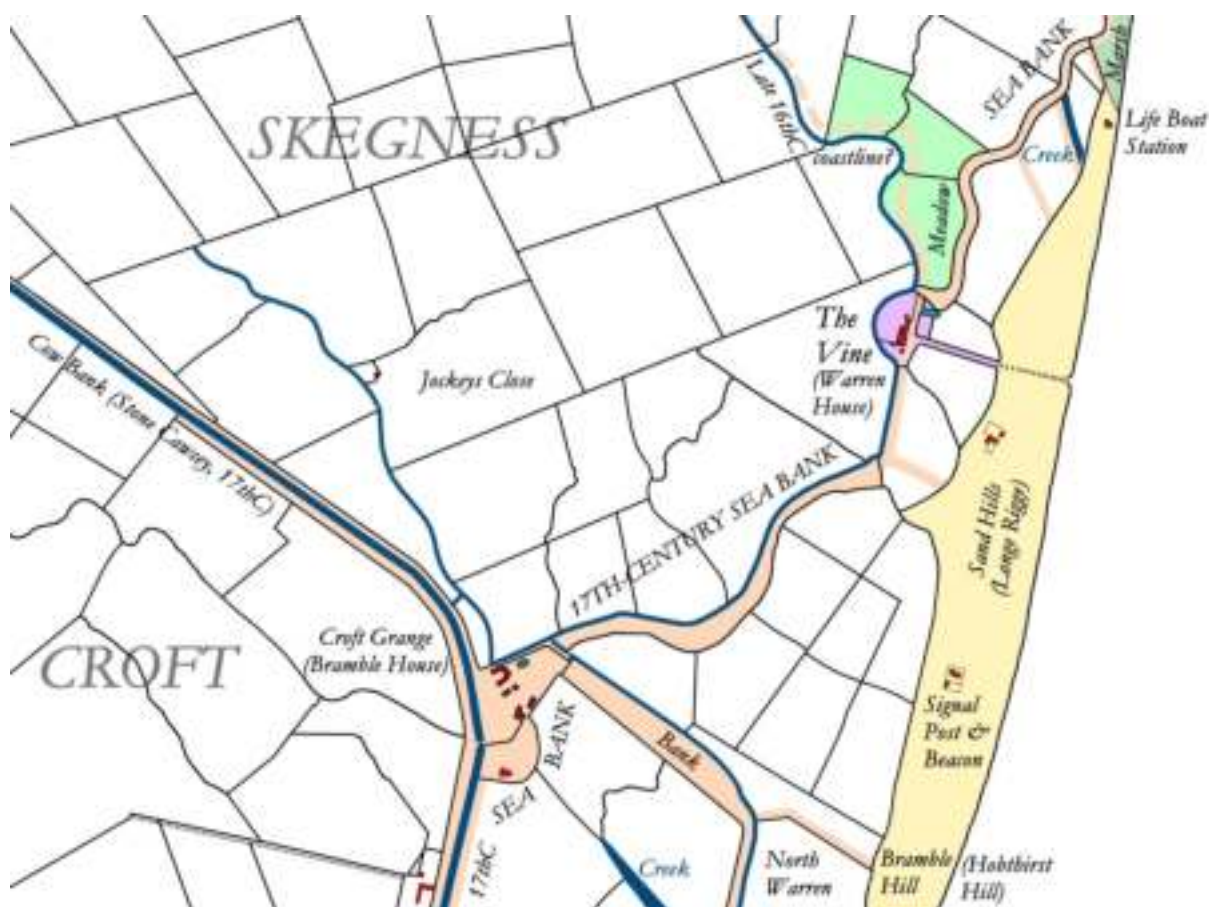


Figure 142: The landscape setting of the Vine Inn, Skegness, from the 1849 Tithe Map, showing how it sat on and behind a seventeenth-century sea bank and potentially on the edge of the late sixteenth-century coastline—at the end of what may be an early ‘ness’—looking at the indications preserved in the Lidar and recorded banks (in orange); see further fig. 91 for the underlying creeks of this area.

<sup>659</sup> See *Stamford Mercury*, 15 May 1777, p. 4, for an early advertisement of the Dolphin Inn; previously in the tenure of Thomas Harrison, Thomas Marroit had taken it over and announced in 1777 that he ‘intends fitting up the same before the ensuing Bathing Season, in a neat and elegant Manner, for the Reception of such Ladies and Gentlemen as shall please to honor him with their company’. See further Robinson, *Lincolnshire Seaside*, pp. 58–9; for the ‘New Inn’ (the Crown/Crown and Anchor, built 1820), see *Stamford Mercury*, 21 June 1822, p. 1, and 25 April 1823, p. 2, which note that it offered both hot and cold baths, as well as several lodging-houses ‘adapted for genteel families’, and *SM*, 20 June 1834, p. 3, which notes the presence of ‘a new commodious Warm Bath... containing a neat Dressing-room and Dutch Tile Bath’.

<sup>660</sup> Lincolnshire Archives LQS/D/9/1/5/2; Robinson, *Lincolnshire Seaside*, pp. 56–7. The earliest newspaper record of the inn seems to come from 1793, when it was known as ‘the House of Thomas Frow, Victualler, in Mablethorpe’ (*Stamford Mercury*, 30 August 1793, p. 1), though the cited 1792 alehouse recognizance indicates that in the previous year it was run by one Thomas Parker. For a bathing advert from Frow’s tenure at the inn, see *Stamford Mercury*, 22 May 1807, p. 3, and for the name ‘Sign of the Castle’, see *Stamford Mercury*, 27 December 1811, p. 1.

House/The Jolly Bacchus, although the resort here took longer to grow and was kept deliberately more ‘select’ and genteel than its rowdier neighbour to the north.<sup>661</sup>

Turning to Skegness, there seems to have been little more than a small hamlet here with a scattering of surrounding settlements prior to the establishment of two eighteenth-century bathing inns in the parish, the original town having been washed away in the sixteenth century and the new haven apparently falling out of use early in the eighteenth century.<sup>662</sup> One of these new bathing inns was the Vine Inn, aka the Old Hotel or Skegness Hotel (later known as Enderby’s before becoming the Vine once again). This was established on a bank close to the dunes by 1772, probably reusing the Warren House that had been here in the 1760s (thus explaining some apparent seventeenth-century fabric in the inn), and it is depicted on Armstrong’s 1779 *Map of Lincolnshire* as the only ‘Bathing House and Tavern’ mapped on the Lincolnshire coastline.<sup>663</sup> The other was the New Hotel, later Hildred’s, which was founded on the High Street that follows the line of the surviving late medieval east–west sea-bank. Although often said to date from the early nineteenth century, this inn was definitely in place by 1792

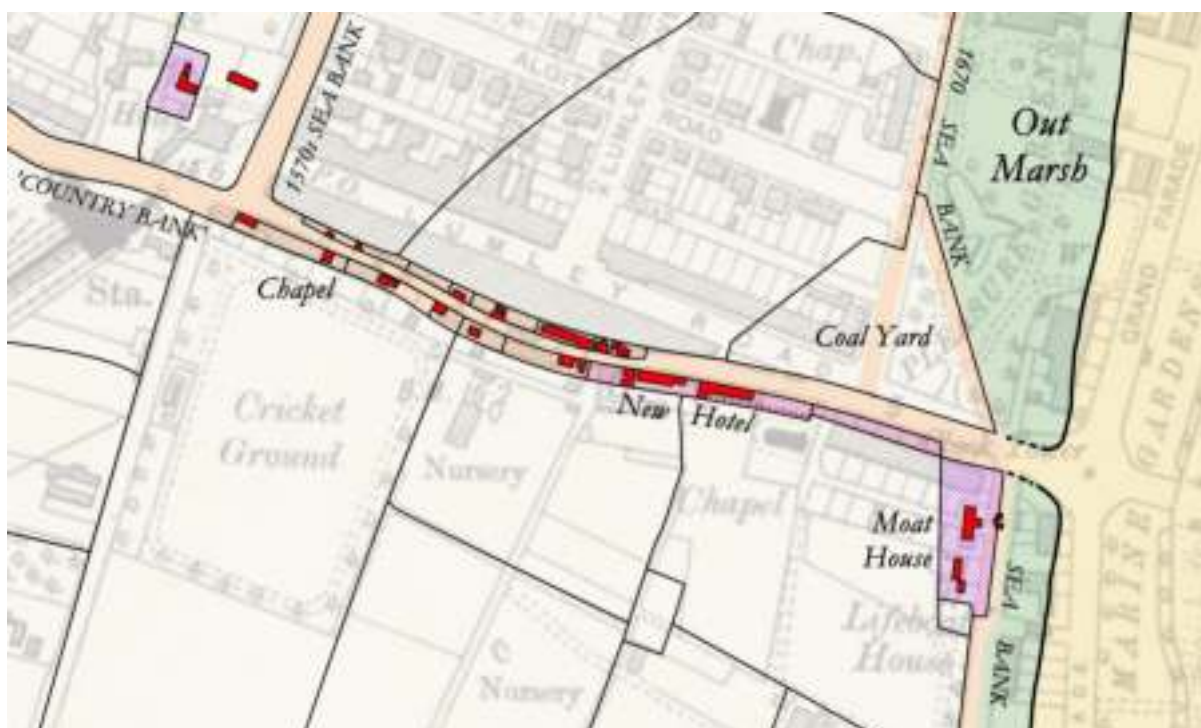


Figure 143: The landscape setting of the New Hotel/Hildred’s—this is based on the 1849 Tithe Map; buildings present in 1849 are shown in red whilst those properties being definitely used for bathing in the late eighteenth century are shown in purple (Underlying base map: OS Six Inch 1907, courtesy of the National Library of Scotland).

<sup>661</sup> Neller, ‘Skegness, Mablethorpe and Cleethorpes’, p. 38. There seems to be a complicated history for Sutton House/The Jolly Bacchus—the former is being run by John Grove as a bathing hotel in the 1790s and early 1800s, but is then pulled down in 1805, and is said to have been replaced by the Bacchus. However, the Searby family who ran the new Bacchus seem to have already been running an inn in Sutton whilst Sutton House was functioning, as can be seen from the 1798 alehouse recognizances, which have entries for both Joshua Searby and John Grove in that year: Lincolnshire Archives LQS/D/9/1/5/19 and LQS/D/9/1/5/1; *Stamford Mercury*, 18 March 1796, p. 2; *SM* 10 May 1799, p. 4; *SM*, 5 June 1801; *SM*, 5 April 1805, p. 1; *SM* 5 August 1825, p. 1; Robinson, *Lincolnshire Seaside*, p. 57. Sutton House itself was originally the property of the East Midlands hosiery entrepreneur William Elliott, who retired to Sutton House; on his death in 1792, it is said that his home ‘became a hotel and bathing house to encourage others to follow’ (‘William Elliott (1707–1792)’, *Leicester Museums’ Knitting Together: The Heritage of the East Midlands Knitting Industry website*, <https://www.knittingtogether.org.uk/behind-the-scenes/the-people/william-elliott-1707-1792/> (accessed 2022)).

<sup>662</sup> See above, Section 2, on the new Skegness haven and its history.

<sup>663</sup> Robinson, *Lincolnshire Seaside*, pp. 54–5 and p. 51 for Mitchell’s 1765 chart showing Warren House; Kime, *Skegness*, pp. 19–20. The inn was known as the Vine Inn from at least 1792, although its name has varied over time: *Stamford Mercury*, 27 January 1792, p. 1.





Figure 144: Lumley Road, Skegness, the new main street for the town built in the late nineteenth century; the earlier New Hotel/Hildred's can be seen on the left, where the Hildred Centre now stands; from an early twentieth-century postcard.

and seems to have its origins as a hostel for the Rev. Wall's Moat House (built 1780, replacing an earlier building washed away by the sea).<sup>664</sup> These establishments were joined by a number of lodging houses and houses-to-let from the late eighteenth-century onwards, such as Mr Everington's house 'within Three or Four Hundred Yards of the Bathing Machines' and J. Bowering's house, which she had fitted up 'in a genteel Manner for the Reception of BOARDERS during the Bathing Season... and she will do every Thing in her Power to make their Stay agreeable'.<sup>665</sup> Subsequently, these two inns seem together to have formed the nucleus of the resort that grew up here by the end of the nineteenth century (see figs 29a and 31). Although it was still referred to as a 'retired watering place' and 'free from bustle' in 1866, Skegness was by then already developing into a significant resort—in 1861, 3,000 attended the races here, and in 1859 more than a hundred children from one of the Burgh schools apparently 'had a glorious day at the sea-side, spent in cricketing, donkey-riding and other appetite-getting fun'.<sup>666</sup>

Needless to say, not every Georgian bathing inn led to the development of a small resort—inns offering river-bathing failed to find an audience in the same way that those providing beach-bathing did, whilst the bathing inns at Freiston Shore (the early eighteenth-century Coach & Horses/Plummers and the mid-eighteenth-century Marine)<sup>667</sup> and Saltfleet (the sixteenth- or seventeenth-century New Inn)<sup>668</sup> fell out of favour at least in part because of saltmarsh growth and the construction of sea-banks that created a barrier between them and the

<sup>664</sup> See, for example, Lincolnshire Archive LQS/D/9/1/3/23; Robinson, *Lincolnshire Seaside*, p. 55; Kime, *Skegness*, pp. 18, 20–1; and above in Section 2 for the observation that the Tithe Apportionment Schedule confirms that the New Hotel stood on Walls' land. For an advert for the Rev. Walls' house to the east of the New Hotel, see *Stamford Mercury*, 10 May 1799, p. 2, which notes that it provided 'good Stabling, Grass for horses, Room for three Carriages, a Garden well planted with Strawberries, and the Use of a Milch Cow', along with a maid servant and 'a very convenient new Bathing Machine upon the Spot'.

<sup>665</sup> *Stamford Mercury*, 25 June 1784, p. 4; *SM*, 23 June 1786, p. 1.

<sup>666</sup> Robinson, *Lincolnshire Seaside*, p. 64.

<sup>667</sup> Lincolnshire HER MLI88792 and MLI88793; Robinson, *Lincolnshire Seaside*, p. 54.

<sup>668</sup> Sturman, 'Saltfleet and the New Inn'; Pawley, *Lincolnshire Coastal Villages*, p. 238.

waters.<sup>669</sup> Those that ultimately grew to be towns also had the enormous advantage of being connected to the railway network—Saltfleet and Freiston both missed out on this, and suffered as a result, whilst Cleethorpes got its railway in 1863, Skegness in 1873, and Mablethorpe in 1877. However, whilst undoubtedly significant, not least in inspiring local landowners and others to invest in the creation and enlargement of these new towns,<sup>670</sup> it is worth noting that the connection to the railway network was itself probably something that was influenced by the proven and continuing popularity of Cleethorpes, Mablethorpe and Skegness with bathers and tourists prior to the railways arriving, as noted above. Given that this mid-nineteenth-century popularity seems to have ultimately had its roots in the establishment of the bathing inns here, there would thus seem to be a credible argument for seeing these ‘new inns’ as having had a crucial role in the creation of the modern Lincolnshire coastal landscape that continues to predominate into the twenty-first century.

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<sup>669</sup> Robinson, *Lincolnshire Seaside*, p. 54; D. N. Robinson, ‘The Saltfleetby–Theddlethorpe coastline’, *Transactions of the Lincolnshire Naturalists’ Union* 21.1 (1984), 1–12 at p. 3.

<sup>670</sup> Neller, ‘Skegness, Mablethorpe and Cleethorpes’; Neller, ‘Skegness, a history of railway excursions’; Pearson, ‘Railways in relation to resort development’.

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# 4

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Afterword:  
The Wider Relevance and Utility of *Land*  
*on the Edge*

## Introduction

The aim of the *Land on the Edge* project has been to provide an interdisciplinary model and synthesis of the landscape evolution of Lincolnshire's dynamic and fascinating coastal zone that takes account of all the available sources of evidence via a wide-ranging process of data collection, mapping and analysis. In the preceding sections, the sources and methodology of the approach adopted here were outlined, followed by a detailed examination of the landscape evolution of the coastline from Boston to Grimsby based on this material, supplemented by a selection of thematic summaries relating to specific topics of interest. In this closing section, the potential utility of the results of this project are briefly considered, exploring how and by whom this report could be used, beyond those with an academic, research or personal interest in the topics and region examined here. Finally, this section ends by identifying some possible avenues for further research on this coastline.

## The potential utility of *Land on the Edge*

### Individual innkeepers and publicans

One of the motivations for the *Land on the Edge* project was to allow the present and former inns and public houses of the Lincolnshire coastline to be situated within their historic landscape context. As the other strands of the broader *Inns on the Edge* project make clear, innkeepers and publicans are facing an increasingly hostile economic outlook,<sup>671</sup> and one potential way of dealing with this is to utilise public interest in both the history of the individual pubs and their local areas. Indeed, research suggests that by explicitly bringing 'history and heritage to the fore', one can enhance the cultural and social value of the pub to the local community, acting to 'rejuvenate community interest in such drinking houses, leading to wider usage by residents', and thus helping to ensure that these important communal facilities and socio-cultural hubs continue to be sustainable.<sup>672</sup> The current report, by offering a more detailed understanding of the historic landscape context of pubs and inns in the coastal zone and its evolution over time, has the potential to add to such endeavours. This is perhaps particularly the case for those pubs that are 'historic', as defined in the *Inns on the Edge* report, but it also applies more widely too. Some potential ways in which publicans and innkeepers might use this report and the derivative materials include:

- To place their establishment within the wider context of the historical development of inns and drinking-houses along the Lincolnshire coastline, as outlined especially in Section 3.8, which discusses how the earliest inns and their modern successors often reflected historical landscape arrangements

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<sup>671</sup> Figures from July 2022 suggest that the total number of pubs across England and Wales has fallen below 40,000, with the 7,000 lost since 2012 coming on top of a loss of *c.* 14,000 pubs from 1990–2012: 'Pub numbers fall to lowest on record', *BBC News*, 4 July 2022, <https://www.bbc.co.uk/news/business-62031833>; V. Ellis and G. Bosworth, 'Supporting rural entrepreneurship in the UK microbrewery sector', *British Food Journal* 117.11 (2015), 2724–38 at p. 2726.

<sup>672</sup> C. L. Markham, 'From book clubs to the Archers, how to reinvigorate the local village pub', *The Conversation*, 5 February 2020, <https://theconversation.com/from-book-clubs-to-the-archers-how-to-reinvigorate-the-local-village-pub-129673>. See further C. L. Markham, *The Public House in the Rural Community* (University of Lincoln PhD Thesis, 2014), on the role of pubs within rural communities and the possibility of using local and pub history as a means of supporting the pub and enhancing its cultural and, ultimately, social value to the local community (for example, pp. 195–6, 211–14, 231, 240). In this context, it is also worth noting that the pubs taken over by the nationwide chain J D Wetherspoon deliberately make use of historical displays and explicitly root their pubs in local history and landmarks, making use of 'local-specific material... created by researchers employed by the company' with the aim of establishing clear 'roots in locality' for each establishment, with customers interviewed by researchers seeming to appreciate this effort ('I always loved the historical references'): C. Rountree and R. Ackroyd, 'More than just a shop that sells beer? J D Wetherspoon and the Pub Authenticity–Value Aesthetic', in M. Hailwood and D. Toner (eds) *Biographies of Drink: A Case Study Approach to our Historical Relationship with Alcohol* (Newcastle, 2015), pp. 100–35 at pp. 114, 120, 130; see also 'Pub Histories' at <https://www.jdwetherspoon.com/pub-histories/> (accessed 2023).

(particularly the medieval to early modern ports, creeks and waterways), whilst inns established from the mid–late eighteenth century onwards played a large role in the creation of the modern resort landscape of Lincolnshire.

- To identify how their local landscape context has evolved and changed over time, so that this information can be used to add a deeper and perhaps less well-known layer of history to their own establishment’s story. Much of the region looked radically different in the past, being characterised by winding saltmarsh creeks, estuarine rivers, wetlands and islands, and the local essays and maps included in the present report can be used to identify the character of their immediate landscape and how it has changed over time, presenting a story that is likely to be relatively unfamiliar to residents and patrons.
- To identify local sites of historical interest and so enable pubs to act as a repository for a wider knowledge and interest in the local area, whilst embedding them more firmly within it.<sup>673</sup> In particular, the thematic essays in Section 3 offer a number of potential historical topics and sites that could be used in this way by pubs in different parts of the coastal zone, from medieval and later landscapes of defence, through to places where the prehistoric land surface can still be seen on the foreshore, sites where smuggling and piracy were rife prior to the creation of the resort coast, tales of towns and villages lost to coastal erosion over the centuries, and areas where the remnants of the important medieval salt-making industry that helped reshape the coastal landscape can still be seen today.
- To identify whether their pub was situated at or close to one of the early ports and creeks of the Lincolnshire coast, which each have their own intriguing histories as documented above (Section 3.2) and which originated in a period when the Lincolnshire coastal zone was one of the wealthiest and most economically active parts of the country.

### *The Inns on the Edge* project

Although the primary focus of *Land on the Edge* was to characterise and analyse the historic landscape of the Lincolnshire coastal zone, it has also produced material that is of relevance to the broader Historic England/Lincolnshire County Council *Inns on the Edge* project and that strand’s focus on the historic inns themselves and their individual histories. Elements likely to be of particular interest from the perspective of that project include the general analysis of the locations and roles of inns on the Lincolnshire coast in Section 3.8, along with the presentation of data from the Spare Beds and Stabling Survey of 1686, which gives us our earliest window onto the general distribution of inns along the coastal zone. In addition, the current project also looked in some detail at the histories of specific inns, using local newspaper reports, alehouse recognizances (fig. 145), tithe maps and apportionment schedules, and other sources to produce maps of their landscape contexts and offer new insights into their early histories and likely periods of operation. In some cases, the inns in question are arguably rather older or more interesting than is usually claimed, and elements of this research have been fed into the *Inns on the Edge* report. In other cases, links between these inns and wider coastal life can be identified, as with the rather wild smuggling episode of the 1830s that seems to have begun at the Book in Hand, Mablethorpe, and ended with pistols and cutlasses drawn at the old Theddlethorpe Haven.<sup>674</sup>

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<sup>673</sup> Markham, *The Public House*, p. 214, cites a publican from Lincolnshire who observed that “[I] gained so many customers by displaying and celebrating the history of the pub and local area’, whilst one local resident commented that ‘What I like about this pub is you get people popping in on the off chance the displays have changed’ and another recalled that they only started to visit the pub after hearing about the historical displays (p. 212).

<sup>674</sup> Above, Section 3.6. Another instance of an inn being involved in smuggling beyond those mentioned in the main sections of this report relates to The Ark, North Somercotes, with two waggon-loads of smuggled gin apparently having been ‘taken away from The Ark’ in the nineteenth century: E. H. Ruscoe, *Ruscoe’s Illustrated Guide to Mablethorpe, Sutton, Louth, Alford, etc* (Louth, 1889), p. 19, and fig. 55 of the current report for the location of The Ark by a large down-cutting creek. As the Primitive Methodists wrote in their magazine in 1866, until recently, ‘North Somercotes... had been notorious for drunkenness, Sabbath desecration, and smuggling’, though they claimed it had

## The Historic Environment Records and heritage-related projects

The materials collected, produced, and analysed by this project are likely to be of considerable use to the Historic Environment Records and heritage teams, helping to inform the research and management priorities for this area of the county and the heritage assets within it, as well as to archaeological consultants and contractors who are working on projects in this region. Not only does this report provide a full analysis and synthesis of the evidence relating to the evolution of the diverse and important coastal landscape of Lincolnshire between Boston and Grimsby, thus helping to both elucidate this and provide a context for finds, excavations and other projects in this zone, but the individual maps included in this volume also stand independently as valuable components that can be used in the work of the HERs and others to identify areas or unrecorded features of potential interest (such as possible port sites, industrial sites, sea-banks or roddons) that might be at risk from future developments. Likewise, the maps of the pre-inundation land surface and its gradual flooding can be used to identify sites where environmentally interesting basal peats or forest exposures are likely to be encountered, or conversely where they are likely to be located far too deep to be affected by surface developments. In addition to this, it is worth noting that the current research project also shows the value of integrating data from the Portable Antiquities Scheme and other sources with that of the HER—a full picture of the settlement and exploitation of the former coastal wetlands required the use of all of the available material. For example, the dense scatters of Late Saxon and medieval finds from on and around the ancient roddons in the Skidbrooke, Saltfleetby and Theddlethorpe areas were only visible in the PAS data, whilst a complete overview of the extent of late prehistoric to Romano-British salt-making industry in the southern Outmarsh required the consultation of grey literature reports and the finds lists of Betty Kirkham in addition to the records logged in the HER.

Aside from the above, it can be noted that the *Land on the Edge* project addresses several of the elements of the wider research strategy for the region, as outlined in the East Midlands Historic Environment Research Framework (EMHERF), which was funded by Historic England.<sup>675</sup> In terms of the ‘Research Foundations’ that this framework identified, by undertaking a wide-ranging historic landscape reconstruction across the whole coastal region, *Land on the Edge* helps fulfil a number of these, such as the need to investigate ‘blank areas’ with little to no archaeological data recorded, as well as the recommendations to develop research into regional palaeochannels, map the Pleistocene and Holocene landscapes of the coastal zone (including the submerged

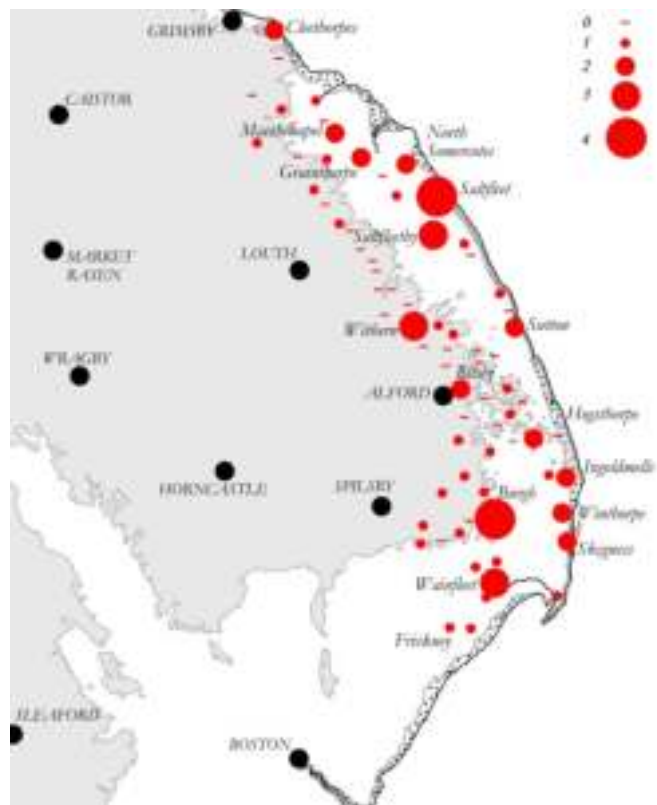


Figure 145: The distribution and number of coastal inns licensed in the Lindsey Quarter Sessions alehouse recognizances of the 1790s. The map shows the number recorded from each parish and settlement in the area from Cleothorpes to Friskney, including those licensed in settlements on the edge of the Middle Marsh; note, the depiction of the coastline is after Captain Armstrong's 1779 *Map of Lincolnshire*.

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been turned around by their mission, so that ‘some of the most depraved men were converted’ (J. Wood, ‘North Somercotes Primitive Methodist Chapel’, *The Primitive Methodist Juvenile Magazine* 15 (1866), 118–21 at p. 120).

<sup>675</sup> D. Knight, B. Vyner and C. Allen, *East Midlands Heritage: An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands* (Nottingham & York, 2012); Research Frameworks Network, *East Midlands Historic Environment Research Framework*, <https://researchframeworks.org/emherf/> (accessed 2021–3).

landscapes of Doggerland), elucidate historic environment change, and study the environmental impact of modern and earlier industrial activity (here primarily that of the salt-making industry).<sup>676</sup> Furthermore, with regard to the period-specific Research Objectives, this project can help address objectives such as those relating to identifying the extent and nature of the pre-inundation landscape of the westernmost parts of Doggerland, and the need for research into Roman-era landscapes—including the role of rivers as foci for industrial production—and the identification of river courses from palaeochannel surveys.<sup>677</sup> It is also relevant to other identified research objectives, offering a baseline from which the landscape settings of Anglo-Saxon burial sites in the Outmarsh and on the edge of the Middle Marsh can be assessed,<sup>678</sup> providing evidence relating to the development and expansion of the Late Saxon to medieval salt extraction industry in the coastal zone, and helping meet the need for landscape assessments of ports and trading routes in medieval Lincolnshire.<sup>679</sup> Finally, it is worth observing that the work undertaken for *Land at the Edge* likewise fits well within the ‘overarching research themes’ for the region as identified by the EMHERF, particularly those relating to the ‘Environment’<sup>680</sup> and ‘Communications’ strands.<sup>681</sup>

The current project also has a potential role to play in furthering the work already done on landscape characterisation by the Historic Landscape Characterisation Project for Lincolnshire, which ended in 2011.<sup>682</sup> This earlier project identified 10 distinct Historic Landscape Character Zones across 3 Character Areas—‘The Grazing Marshes’, ‘The Wash’, and ‘The Fens’—within the region covered by the current project, although the Fenland element (‘The Eastern Fens’) is only briefly considered here. Needless to say, the *Land on the Edge* project materials have the potential to significantly supplement and, in some cases, modify and develop these landscape characterisations (which are generalised and concise by design), due to the current project’s detailed and interdisciplinary nature, as well as its use of Lidar and other evidence to produce reconstructions of the historic landscapes that existed here and their evolution over time. As was observed in the main analysis presented in Section 2, the notion that the Lincolnshire coastal zone is best considered not as a single, fairly homogenous landscape, but rather as a set of related yet varied and dynamic landscapes that have distinct characteristics, histories and trajectories, is one that is strongly supported by the current project. However, it should be noted that the sub-units into which the coastal zone is divided for this project do differ from the HLC character zones,<sup>683</sup> cutting across them in several cases, and it may be worth considering how the results of this project could prompt refinement or development of some of the HLC zones.

## Tourism and economic development projects

The results of the present project may well be helpful to efforts to encourage tourism and economic development in the Lincolnshire coastal zone too. As a recent study on the value of heritage in Lincolnshire has noted, heritage and history are major drivers of UK tourism, both domestic and international, with natural heritage visits

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<sup>676</sup> Knight *et al*, *East Midlands Heritage*, pp. 13, 17–18; *Building the Research Foundations*, <https://researchframeworks.org/emherf/building-the-research-foundations/>, 1.7, 5.10, 5.11, 5.12, 5.13.

<sup>677</sup> Knight *et al*, *East Midlands Heritage*, Research Objectives 1H, 2A, 2I and 5I.

<sup>678</sup> Knight *et al*, *East Midlands Heritage*, Research Objective 6B. Note, early Anglo-Saxon burial sites in the study region are primarily known from plough-soil assemblages discovered via metal-detecting and recorded by the Portable Antiquities Scheme, and the PAS dataset includes assemblages representative of several such cemeteries that don’t appear in the HER records.

<sup>679</sup> Knight *et al*, *East Midlands Heritage*, Research Objectives 6F, 6H and 7D.

<sup>680</sup> Notably climatic change, palaeochannels, changes in the spatial extent of wetlands, the submergence of Doggerland, and the exploitation and settlement of specific ecological zones: Knight *et al*, *East Midlands Heritage*, p. 136.

<sup>681</sup> Knight *et al*, *East Midlands Heritage*, p. 138, especially the role of rivers and maritime waterborne transport.

<sup>682</sup> J. Lord and A. MacIntosh, *The Historic Character of the County of Lincolnshire: Report* (Lincoln, 2011) and J. Lord and A. MacIntosh, *The Historic Character of the County of Lincolnshire: The Historic Landscape Character Zones* (Lincoln, 2011).

<sup>683</sup> They are, however, similar to the more limited sample zones identified in H. Fenwick, *The Lincolnshire Marsh: Landscape Evolution, Settlement Development and the Salt Industry* (University of Hull PhD Thesis, 2007).



Figure 146: The extent of the sea flooding along the Lincolnshire coast in 1953, after Barnes and King, Robinson, and Steers (see fn. 686). Note, the flooding occurred mainly on the Outmarsh and was constrained north of Mablethorpe by the presence of saltern mounds, storm beaches and a substantial dune belt in this area (Underlying modern mapping © OpenStreetMap contributors, available under the Open Database Licence).

becoming increasingly popular and heritage tourism accounting for 22% of all tourist spending. Furthermore, it has been found that heritage projects tend to have a positive economic impact on the surrounding area, in terms of both visitor spending and job creation.<sup>684</sup> In this light, there is obvious scope for using heritage tourism as part of wider efforts to economically invigorate the coastal zone, combatting deprivation, and grow Lincolnshire’s visitor economy, particular as whilst coastal trips comprise 27% of heritage tourism visits in the UK, the East Midlands in general underperforms in terms of visits motivated by heritage and history, suggesting that there is potential for significant growth in this area.<sup>685</sup>

The value of the *Land on the Edge* project for all this is likely to come primarily in offering an rich yet academic synthesis of the history of this landscape, which can be utilised, developed and deployed with confidence by various projects and teams to identify heritage narratives and sites that can help in the effort to promote Lincolnshire’s heritage coast,

including the Lincolnshire Coastal Country Park, and to persuade visitors to the coastal resorts to explore the wider landscape beyond these. The Lincolnshire coastal zone clearly has a fascinating tale to be told in terms of its broader historical development, with many parts of its story still legible in the landscape today. From its deep history as the westernmost part of Doggerland that was inundated from around 8,000 years ago onwards, with remnants of the drowned landscape visible at low tide along the coastline, through to its later history as an economically prosperous and maritime-focussed landscape of salt-making, ports and harbours that was under constant threat from the sea (as witnessed by the loss of multiple settlements all along the coast and the fragments of medieval sea-banks still standing today), and its more recent evolution into a resort-coast for the richer elements of Georgian society who sowed the seeds for the development of the great tourist towns of the east coast, there are a wide range of narratives that might be picked up here. The thematic discussions in Section 3 may be of particular use, offering background narrative and suggested sites of interest relating to these topics and others, including landscapes of defence, smuggling and piracy along the Lincolnshire coast.

## Research and planning relating to future coastal change

The history of the project zone from Boston to Grimsby is one in which the constantly changing and evolving relationship between the land and the sea plays a central role. Although the Lincolnshire Outmarsh and Low Grounds began as wide areas of coastal marshes, they have been protected from marine flooding in recent centuries by lines of sea-banks, dunes, and the mounds of waste left by the salt-making industry, which has

<sup>684</sup> A. Slater, *The Value of Heritage & the Historic Environment in Lincolnshire: Literature Review* (Beckenham, 2019), pp. 10–12, 16.

<sup>685</sup> Slater, *Value of Heritage*, p. 12.



allowed them to be reclaimed and used for grazing and arable farming, despite lying below the mean high-water level of spring tides on this coast. Nonetheless, these defences have been repeatedly tested by the sea. Indeed, the medieval and early modern periods saw the loss of substantial areas of coastal land, large chunks of sea-bank, and even whole settlements in the zone between Mablethorpe and Skegness, and this vulnerability has continued into recent times, most notably with the devastating floods of 1953 that saw large parts of Outmarsh inundated (fig. 146).<sup>686</sup> In this light, it is hoped that the current project, through its detailed investigation of the history of this landscape and its relationship with the sea over the past 8,000 years or so, will be of use to the Environment Agency and other groups whose role it is to model and plan responses to future coastal changes and inundations; at the very least, it offers a substantial body of material on past processes of coastal change in this area and the responses to them that may offer lessons or suggestions for the future.<sup>687</sup>

## Directions for future research

With regard to future research, several potential avenues can be suggested. For example, additional archaeological work on topics such as the medieval salt-making industry and the distribution of prehistoric/Romano-British saltern sites (especially outside of the southern Outmarsh and the Wrangle area) would be very welcome, perhaps involving dyke surveys of the kind undertaken in the past by Betty Kirkham,<sup>688</sup> as would projects looking in more detail at the medieval and early modern sea-banks of the region, such as the ‘Roman Bank’ at Huttoft, and the former port sites. Likewise, in terms of the place-name evidence, a complete collection and analysis of the major and minor place-name material from the Outmarsh and Wash coastline would be of considerable benefit—the English Place-Name Society volumes that have so far been published for Lincolnshire only cover the northernmost part of our study zone, and whilst other materials are available and have been used in the present project, a full modern treatment would be of value. It would also be good to see additional investigations into, and monitoring of, the submerged and buried fragments of the pre-inundation landscape here, particularly with respect to those outcrops that occur on the coastline itself, which appear to have suffered considerably from erosion and loss in recent times. Inland, further borehole/auger and geoarchaeological surveys would also be welcome and add to our knowledge of the landscape and its evolution over time, as would studies that use intertidal and offshore data. Finally, in terms of historical material, additional work on the medieval documentation relating to the Lincolnshire Marsh would certainly be worthwhile; for example, a study and translation of other, unpublished court rolls from the coastal zone would be interesting, given how valuable the published medieval court rolls from the manor of Ingoldmells are.

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<sup>686</sup> F. A. Barnes and C. A. M. King, ‘The Lincolnshire coastline and the 1953 storm flood’, *Geography* 38.3 (1953), 141–60. Note, the floods of 1953 reached up to *c.* 5.4m OD (17.6ft OD) all along the Lincolnshire coast, although inland the water level seems to have ultimately only risen to *c.* 2.75m OD (9ft OD), a level that was still more than enough to completely flood the Outmarsh south of Meers Bank, Mablethorpe. For the extent of the sea floods in that year, see Barnes and King, pp. 146–9 and fig. 1; D. N. Robinson, *The Book of the Lincolnshire Seaside* (Buckingham, 1981), p. 137 (map); and J. A. Steers, ‘The east coast floods’, *The Geographical Journal* 119.3 (1953), 280–95 at p. 281 (fig. 1)—these sources were used in the creation of the map included here as fig. 146.

<sup>687</sup> On potential sea-level rises in the near-future, see, for example, T. Howard *et al.*, *Exploratory Sea Level Projections for the UK to 2300*, Environment Agency Project no. SC150009 (Bristol, 2019), and for longer-term predicted sea-level rises, see P. U. Clark *et al.*, ‘Consequences of twenty-first-century policy for multi-millennial climate and sea-level change’, *Nature Climate Change* 6 (2016), 360–9 including supplementary data, and J. Van Breedam *et al.*, ‘Semi-equilibrated global sea-level change projections for the next 10 000 years’, *Earth System Dynamics* 11 (2020), 953–76 (fig. 12a). For the acceleration in sea-level rise around the UK that has occurred since the nineteenth century and particularly in more recent years, see P. Hogarth *et al.*, ‘Changes in mean sea level around Great Britain over the past 200 years’, *Progress in Oceanography* 192 (2021), 102521, and M. Kendon *et al.*, ‘State of the UK Climate 2021’, *International Journal of Climatology* 42.S1 (2022), 1–80 at pp. 43–5.

<sup>688</sup> As also noted by Tom Lane, in his *Mineral from the Marshes: Coastal Salt-Making in Lincolnshire* (Heckington, 2018), pp. 132–4.



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