

# Water and wetlands in medieval estate management: Glastonbury Abbey, Meare and the Somerset Levels in South West England

Wasser und Niederungsgebiete in der mittelalterlichen Gutswirtschaft:  
Glastonbury Abbey, Meare und die Somerset Levels in Südwestengland

L'eau et les terres inondables dans les propriétés médiévales:  
Glastonbury Abbey, Meare et Somerset Levels au Sud-Ouest de l'Angleterre

Stephen Rippon

Concern over climate change and rising sea level, coupled with recent extensive flooding across Europe, reminds us that wetlands, ranging from extensive coastal marshes to inland river floodplains, still dominate the landscape of many regions. In an era of intensive settlement and agriculture we often see water in such landscapes as a problem, and complex drainage and flood defence systems have been constructed to control their watertables. In the past, however, water was perceived more as a resource, and this paper is an attempt to demonstrate this for one medieval wetland landscape, that of Glastonbury Abbey's manor at Meare in the Somerset Levels (South West England). A strongly interdisciplinary approach is used, integrating remarkably rich documentary material with evidence locked within the historic landscape: the pattern of fields, roads, settlements and watercourses as represented on the earliest (early 19<sup>th</sup> century) cartographic sources, and in many cases still in use today. A series of distinctive 'landscape character areas' are identified which are derived from different approaches towards environmental management. That these wetlands were highly valued in different ways is reflected in a series of acrimonious disputes between Glastonbury and the Dean and Chapter of Wells Cathedral over their respective rights there, and the inclusion of Meare and a series of other islands in the special jurisdiction of the Glastonbury 'Twelve Hides'.

## Introduction

The significance of medieval monasteries in shaping the urban and rural landscape of Europe has long been recognized, and their extensive archives have been a mainstay of medieval socio-economic history. A particular feature of monastic communities was their ability to manage and exploit water, and their role in the reclamation of wetlands, reflecting the increasing intensity with which the landscape was being exploited during the High Middle Ages, is relatively well known (Aston 2000; Bond 1988; 2000 and 2001; Donkin 1958; Rippon 2000). In a society that now values agricultural production so highly, and in the light of the almost relentless trend towards reclamation during the medieval and post-medieval periods, it is, however, easy to over-

look the significance of the wealth of natural resources that wetlands have to offer. Artefacts recovered from the recent excavation of two platforms next to Whittlesey Mere in Fenland (eastern England), for example, have shed important light on medieval fishing techniques, but there is little attempt at palaeogeographical mapping in order to reconstruct the wider seigneurial landscape within which the fishery was but just one element (Lucas 1998; and see Bond 1988, 80–1; Hall 1992, 30–2). This paper is an attempt to achieve this for another wetland area: the freshwater backfens of the Somerset Levels in South West England (Figs. 1–2).

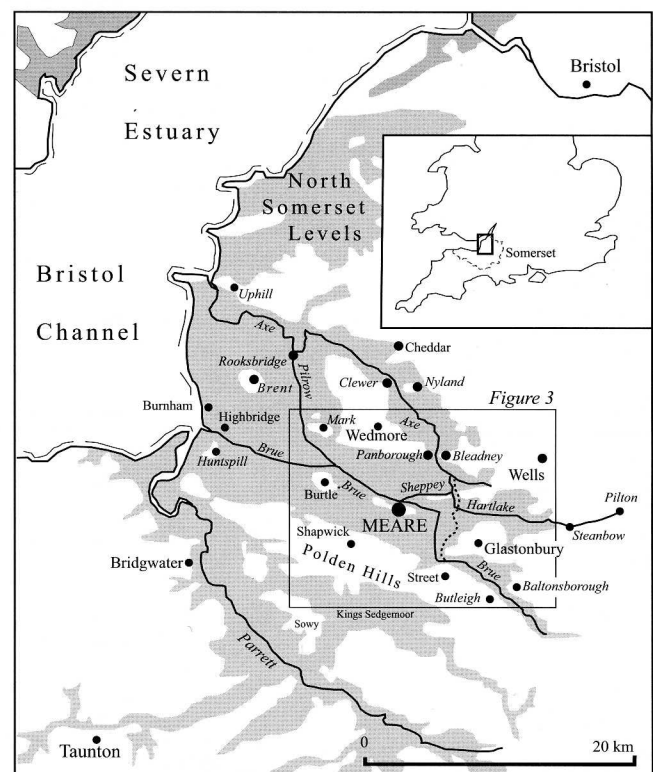


Fig. 1. The Somerset Levels, with places that could be reached by boat from Glastonbury in italics, and other mentioned in the text including the modern river names (the old course of the Brue is shown with a dashed line).

## The changing perception of medieval environments

At the start of the Early Medieval period (5<sup>th</sup> to 7<sup>th</sup> centuries), the Somerset Levels were a rich ecological mosaic, with intertidal marshes towards the coast, and extensive freshwater peatlands in the lower-lying backfens further inland (Fig. 3A). This series of wetland environments offered a range of natural resources that prehistoric communities had exploited, and while some of the coastal marshes appear to have been reclaimed in the Roman period, extensive post-Roman flooding meant that the area had reverted to its natural wetland state (Coles – Coles 1986; Rippon 1997). From the late 7<sup>th</sup>/8<sup>th</sup> centuries Glastonbury Abbey was granted a series of estates that included large areas of these wetlands, and this paper examines the increasing intensity with which those estates were subsequently utilised.

The focus of this study will be the area around Meare, lying in the peat-dominated low-lying backfens, or 'moors', of the Brue Valley immediately west of Glastonbury (Figs. 1–2). The derogatory accounts of such backfens found throughout post-medieval England, and particularly in 19<sup>th</sup> century topographical and agricultural writings, suggest that such areas were perceived as being of little value, with the standing bodies of stagnant water making them unhealthy places to live. In AD 1536, for example, Walter Graves wrote to Cromwell that he had been nearly two years teaching at Crowland (in Fenland) where the climate was so unwholesome that he would rather die than spend a third summer there (*Letters and Papers Hen. VIII, IX, 380*). In the 18<sup>th</sup> century Defoe said of southern Essex that 'This side of the County is richer in land than in inhabitants, occasioned chiefly by the unhealthiness of the air, for these low marsh grounds have been saved out of the river Thames' (*Defoe 1722–7, 8–9*). In the late 18<sup>th</sup> century, *Hasted* (1797–1801, vol. II, 264) painted an equally grim picture, saying of Crayford on the North Kent coast that 'The air is not esteemed in general the most healthy especially the lower or north-east part of it, near the marshes'.

This perception of marshlands as unhealthy places was not, however, universally held, particularly in the medieval period. Leland, for example, described how, during the 14<sup>th</sup> century, Judge Fyneux moved to Herne, on the coast of North East Kent on the advice of physicians, because it was so healthy (*Chandler 1993, 249*). The benefits of reclamation were also widely appreciated, illustrated for example in Matthew Paris' (cited in *Stone 1998, 8*) account of Medieval Fenland, around Crowland:

Concerning this marsh a wonder has happened in our time; for in the years past, beyond living memory, these places were accessible neither for man nor for beast, affording only deep mud with sedge and reeds, and inhabited by birds, indeed more likely by devils as appears from the life of St Guthlac who began to live there and found it a place of horror and solitude. This is now changed into delightful meadows and also arable ground.

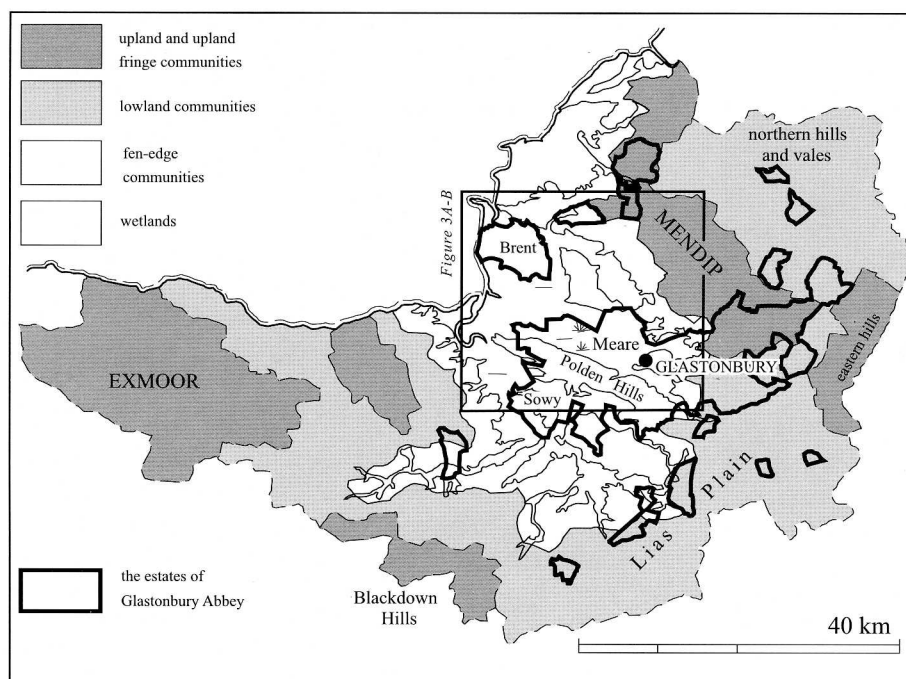
The agricultural potential of wetlands was certainly clearly recognised. In the 16<sup>th</sup> century Leland described Romney Marsh, in South West Kent, as 'a luxuriant feeding ground for cattle, because of the great abundance of grass growing on the mud once cast up by the sea' (*Chandler 1993, 258*). In the early 17<sup>th</sup> century *Defoe* (1722–27, 270) noted the Somerset Levels were 'all a grazing, rich, feeding soil so a great number of large oxen are fed here, which are sent to London'. *Hasted*, who otherwise painted a dour view of life on the North Kent Marshes, also conceded that when ploughed, they could yield 'exceedingly great crops of corn' (*Hasted 1797–1801, vol. II, 203*), while *Young* (1804, 435) described the Norfolk Marshland as 'one of the richest districts of the Kingdom .. [of] extraordinary fertility', though contemporary farmers were condemned for attempting arable cultivation when the soils were more suited to pasture:

the husbandry of these stiff wet soils [is] very ill-understood, and managed in a manner that is reprehensible in almost every particular. ... Instead of a system of miserable tillage, with weeds the chief sign of fertility, the plough ought to be introduced only as a preparation for the most perfect grass system that can be devised. These lands, when well laid down, will fatten the largest bullocks and sheep in England, which is the right employment of them (*Young 1804, 438*).

These reclaimed marshes could, however, support successful arable cultivation and Leland noted that in parts of Fenland 'most of the parishes in the low-lying marshland grow good wheat and beans' (*Chandler 1993, 304*).

That medieval wetlands were perceived in a more positive light than was the case in later periods is supported by more quantifiable data for land prices. For example, in AD 1181, St Paul's Cathedral's manor at Barling (Essex) included 480 acres of arable (on the dryland) worth 6 pence per acre, and a 100 acre marsh worth 18 pence per acre (*Morant 1763–8, 308*). On Battle Abbey's estate at Barnhorne, which extended onto the Pevensy Levels in Sussex, a survey of AD 1305 valued meadow at 18 pence per acre; reclaimed saltmarsh was specified as the most highly prized arable at 12 pence, the best dryland arable only being worth 6 pence, and the rest 3 pence. 'Brookland' (land liable to seasonal floods) was worth 4 pence per acre, rising to 10 pence if properly drained (*Brandon 1971, 70*).

Both anecdotal references, and quantifiable land values, therefore, show that reclaimed wetlands were amongst the most highly valued lands within medieval estates. These reclaimed lands mostly lay on the higher, and naturally better-drained, alluvial land in the coastal marshes and can be contrasted with the extensive lower-lying peat-dominated backfens that were located closer to the dryland edge. These backfens, though rich in natural wetland resources, are today usually perceived as being of less economic value: one senses an implicit assumption that such areas were simply waiting to be reclaimed when they would finally reach their full economic potential. This study will explore whether this was really the case in one of the best-documented backfens: those belonging to Glastonbury Abbey in the Somerset Levels.



**Fig. 2.** The distribution of Glastonbury Abbey's estates in Somerset. The landscape has been divided into four broad types based on communities whose parishes occupied the upland/upland fringe, lowlands, wetlands, and fen-edge (straddling the dry lowlands and the wetlands).

### Meare, Glastonbury and the backfens of the Somerset Levels (Figs. 1–3)

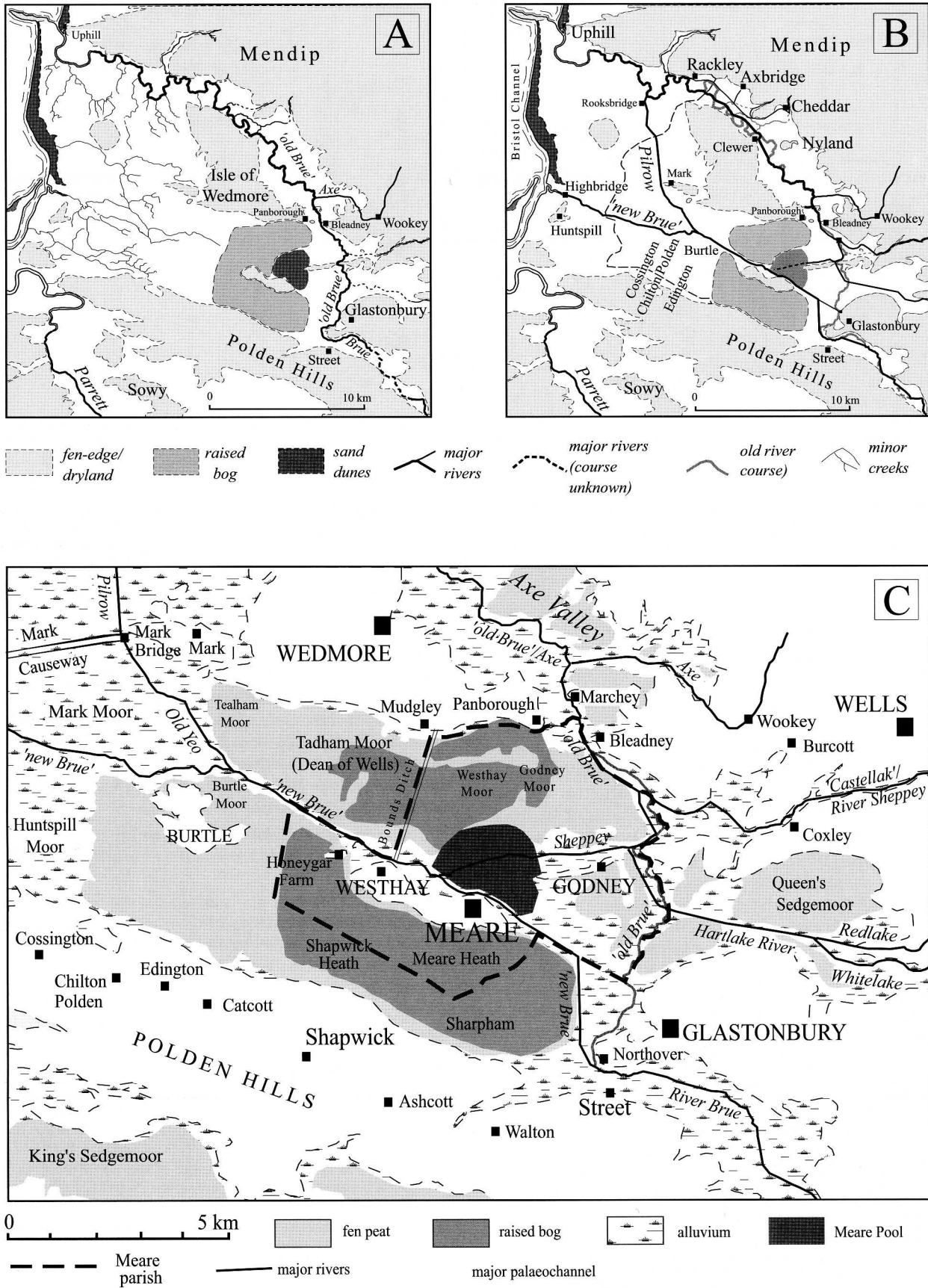
This study does not attempt to provide a definitive landscape history of the manor of Meare, but focuses on a specific theme: the perception of a major landowning institution, Glastonbury Abbey, towards a landscape dominated by water, and its approach toward utilizing such a difficult environment. By the 10<sup>th</sup> century Glastonbury Abbey dominated the Somerset Levels and the islands within them (Fig. 1). One major estate, known in the pre-Conquest period as 'Pouholt' or 'Pouelt', covered the Polden Hills, a long peninsula of bedrock that extended out into the wetlands west of Glastonbury (Abrams 1996, 204–11; Morland 1982, 233–5). This was a landscape characterized by nucleated villages and open fields, probably laid out during the 10<sup>th</sup> century (Aston – Gerrard 1999; Costen 1991 and 1992; Rippon 1997, 160–5). The landscape surrounding the Polden Hills was, however, very different from these dryland areas, being dominated by a variety of low-lying wetland environments ranging from alluvial marshes in the west to freshwater peatlands in the east. To the south of the Poldens lay the island-based estate of Sowy, the wetlands around which were substantially reclaimed in the 12<sup>th</sup> and 13<sup>th</sup> centuries (Musgrove 1997; 1999 and 2001). To the north of the Poldens lay the Brue Valley and another island-based estate, that of Meare, whose mostly unreclaimed landscape is the focus of this study (Fig. 3).

A wide range of sources and techniques can be used to reconstruct the appearance of such medieval landscapes, and the archaeological, palaeoenvironmental, documentary (including field- and place-name) and cartographic evidence must be woven together using the technique of historic landscape analysis (Rippon 2001; 2002; *in press 1*; *in press 2*). The archives of Glastonbury Abbey are particularly rich, and contain a wealth of

information regarding the landscape.<sup>1</sup> These records have seen much attention from ecclesiastical, social, economic, and agrarian historians (Abrams – Carley 1991; Carley 1988; Corcos 2002; Ecclestone 1996; Holt 1987; Harrison 1997; Keil 1964; Lennard 1955/6 and 1975; Postan 1952/3; 1956/7 and 1975; Stacey 1972; Thompson 1997), and while these various studies have examined themes such as tenurial structures and patterns of landuse, they have paid relatively little attention to the physical structure of the landscape or the wealth of non-agrarian resources that the Abbey also valued so highly. The aim of this paper is to address that imbalance.

The research that forms the core of this paper entailed identifying features of the medieval landscape recorded

<sup>1</sup> Glastonbury's charters are collected together in the treatise of *William of Malmesbury* (Scott 1981; henceforth *Malmesbury*) and *John of Glastonbury* (Carley 1985; henceforth *J. Glaston.*), the Great Chartulary of c. 1348 that includes reference to a now lost chartulary the *Liber Terrarum* (Watkins 1947; 1952; 1956; henceforth *G.C. I–III*), and are discussed by Abrams (1996) and Morland (1982). The numbers of these charters in Sawyer (1968) are referred here as References: S.000. A series of monastic surveys also survive for 1189 (Abbot Sully: Stacey 2001; henceforth Sully), 1234/5 (Abbot Amesbury: Elton 1891; henceforth Amesbury), 1260 (Abbot Ford: Elton 1891; henceforth Ford), 1355 (Abbot Monington: British Library Egerton 3321 – Register and Extents of Abbots 1308–55), and 1515/20 (Abbot Beere: British Library Egerton 3034 and 3134 – Terrier of Abbot Richard Beere 1515–20). See Harris 1991 for a list of the archives in Longleat House, Wiltshire. Its estates were again described after the Dissolution in 1539 (Phelps 1836; henceforth Pollard and Moyle). A series of account rolls (1257–1344) and court rolls (1262–1532) survive for Meare (Musgrove 1999), and a long running dispute with the Bishops and Dean of Wells cathedral led to a number of complaints and agreements which describe its moors in some detail (Bird 1907; Baidon 1914; henceforth Wells I–II). There are also histories by *William of Malmesbury* (Scott 1981) and *John of Glastonbury* (Carley 1985) that, although increasingly creative in their accounts of the pre-Conquest period, contain some useful material.



**Fig. 3.** Evolution of the river and canal system in the Somerset Levels. **A:** 'Natural' drainage system in the early medieval period, showing the Brue flowing northwards into the Axe Valley between the Isle of Wedmore and Mendip. Former course of the Brue taken from Aalbersberg 1999, figs. 4.1 and 5.1. **B:** The Brue diverted westwards past Meare. Some of the waters of the rivers entering the Levels between Glastonbury and Meare (the Whitelake, Redlake and Sheppey) were also diverted into the 'new Brue'. **C:** The Brue Valley, with major rivers/canals and other key places mentioned in the text.

**TABLE 1. HISTORIC LANDSCAPE CHARACTER TYPES IN MEARE PARISH, 1806**

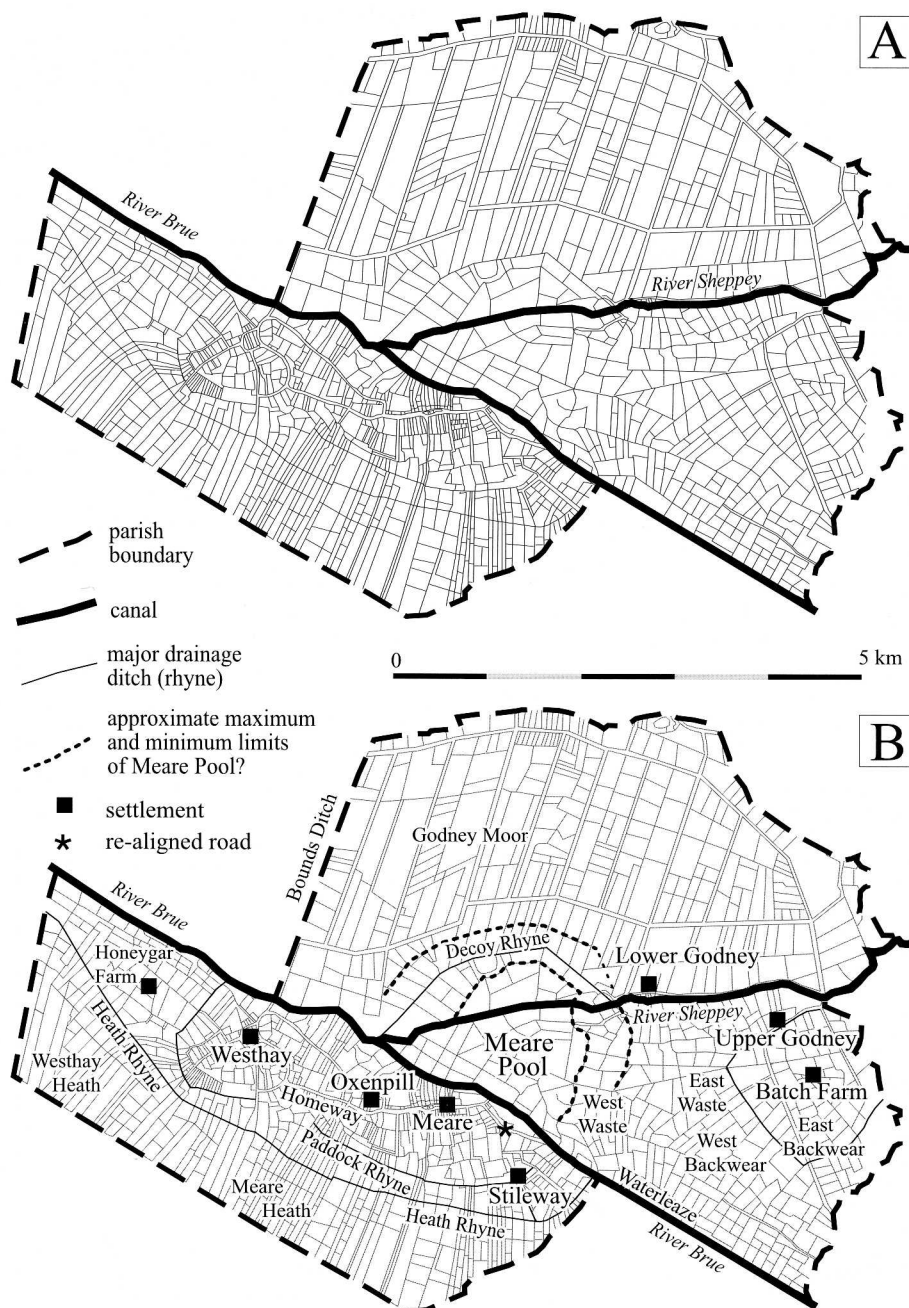
1. Field boundary pattern	2. Roads	3. Settlement	4. Soils	5. Character areas	6. Interpretation	
<b>Irregular, large:</b> large fields of irregular, largely polygonal, layout with little or no sign of overall planning. Incorporates the meandering lines of former natural streams.	absent	absent	alluvium	Meare Pool	Enclosure of last part of Meare Pool to be drained; 17 <sup>th</sup> century.	
<b>Irregular, small:</b> small fields of irregular, rectangular or polygonal shape with little or no sign of overall planning.	sinuous, with areas of roadside waste	mostly spread along roads	dryland	Meare Island Westhay Island	Piecemeal enclosure; mostly medieval.	
<b>Sinuuous coaxial:</b> blocks of rectangular and long-narrow fields laid out between curving/sinuuous axial boundaries. Occasional dog-legs in field boundaries indicate former strip-fields.	sinuous, with areas of roadside waste	restricted to road	dryland	Meare Island	Enclosure (late medieval to 19 <sup>th</sup> century) of former open field furlongs (laid out c. 10 <sup>th</sup> -12 <sup>th</sup> century?).	
<b>Tenement plots:</b> series of long narrow plots with sub-division at street frontage containing buildings.	sinuous, with areas of roadside waste	in 'toft'-like plots along road	dryland	Meare Island ?Westhay Island	Planned village tenements; c. 10 <sup>th</sup> century?	
<b>Short strips:</b> short, narrow, straight-sided strips laid out in small discrete blocks.	absent	absent	fen-edge and alluvial margins	Westhay Island	Enclosed meadow; medieval. Pattern of long-narrow fields suggest a former meadow.	
<b>Intermediate:</b> largely rectangular fields, with some indication of rudimentary structure, but no evidence for overall planning.						
<b>sub-types</b> (see Fig. 5)	I. Small blocks of rectilinear and polygonal fields, arranged around a number of straight axial boundaries but lacking overall coherence.	mostly straight, with little roadside waste	isolated farm	alluvium	East Backwear, Honeygar Farm	Areas of medieval reclamation. Pattern of fields suggest a landscape held in severalty.
	II. Blocks of rectilinear fields, arranged around a number of straight axial boundaries giving degree of overall coherence.	Few, straight, without roadside waste	absent	mostly alluvium (some peat on Westhay Level)	East & West Waste, and West Backwear  Westhay Level (west of Honeygar Farm)	Areas of late- and/or post-medieval reclamation. Pattern of fields suggest a landscape held in severalty.
	III. Blocks of small rectilinear fields, with dog-legs indicative of former strip-fields.	absent	absent	alluvium, fen peat and raised bog	The Hammes	A discrete medieval reclamation. Pattern of long-narrow fields suggest a former common meadow.
<b>Regular (rectilinear):</b> planned landscape structured around long, parallel longitudinal roads and rhynes that create a series of 'blocks'.						
<b>sub-types</b> (see Fig. 5)	A. 'blocks' undivided creating predominantly rectangular fields B. 'blocks' sub-divided further into long, narrow fields C. mostly rectilinear (occasionally polygonal) fields between outer major axial element of landscape and edge of enclosed area					
<b>Regular (longitudinal):</b> planned blocks with a dominant longitudinal axis creating long, narrow fields, all of same orientation, structured around long, parallel longitudinal droveways and rhynes. Occasional dog-legs indicate that some boundaries have ben lost.	broad, funnel shaped droveways forming axial elements of the landscape (highlighted on Fig. 5)	absent	raised bog peat	Meare & Westhay Heaths	Early post medieval reclamation. Changes of direction at lateral rhynes suggests episodic expansion.	
<b>sub-types</b> (see Fig. 5)	1. long, relatively broad, blocks with very few lateral sub-divisions 2. long, relatively broad blocks with lateral sub-divisions 3. long, relatively broad blocks with lateral and some short longitudinal sub-divisions 4. long, narrow fields with very few lateral sub-divisions 5. long, narrow fields with lateral sub-divisions					
<b>Infill:</b> small plots filling the space between major landscape features/other character areas.	various	various	often fen-edge and wetland margins	various locations	areas of reclamation and enclosure; various dates	

TABLE 2. HISTORIC LANDSCAPE CHARACTER AREAS IN MEARE PARISH, 1806

Character area	Landscape type(s)	soils
<b>Meare Island</b>	irregular, intermediate, sinuous coaxial, short strips and tenement plots	dryland and adjacent fen-edge
Complex landscape comprising a manorial centre within a walled precinct, adjacent church and planned village, open fields (sinuous coaxial type landscape), and some fen-edge reclamation. Three modern settlement foci (Fig. 4B) of which Meare village appears to comprise a discrete block of planned tenements, whereas Oxenpill consists of a later, loose agglomeration of farmsteads and cottages. In its present form Stileway is 19 <sup>th</sup> century, though 'building land' is referred to there in 1340 (Meare Court Roll: SRO T/PH/Lon 2/24 10773).		
<b>Westhay Island</b>	irregular, intermediate, short strips and (?) tenement plots	dryland and adjacent fen-edge
Complex landscape, with a possible small block of planned tenements to south west of Manor House Farm. Irregular fields on dryland, with area of fen-edge enclosures/reclamation (short-strip type landscape) to south and west. No 'sinuous coaxial' type landscape suggestive of former open fields.		
<b>Godney Island</b>	irregular	dryland, fen-edge and adjacent alluvium
Area of mostly irregular landscape on and around the bedrock island (though only really evident on the ground, not the 1806 map). A long sinuous boundary runs west from Godney Farm along the watershed of the bedrock ridge. The modern hamlet (Lower Godney) lies on the alluvium next to the Sheppey, though historically the settlement focus may have lain on the bedrock/fen-edge at Upper Godney (Fig. 4B).		
<b>Meare Pool</b>	intermediate, and infill	alluvium
Area of irregular character in the central/eastern area of the former Meare Pool, which post-date the canalized River Sheppey (now the James Weir River). Defined on the north/west by a sinuous boundary that may represent an earlier limit to its drainage/enclosure; the area between this boundary and Decoy Rhyne is one field wide and of 'infill' type landscape: Fig. 5B). Intermittent field boundary to the north/west of, and concentric with, Decoy Pool Rhyne and which marked the limit of flooding on January 16 <sup>th</sup> 1947, might represent the original maximum limit of the Pool. The drainage and enclosure of Meare Pool appears to have started in the early 17 <sup>th</sup> century (see below).		
<b>East Backwear</b>	intermediate	alluvium
Area of intermediate character, centred on Batch Farm, slightly more irregular in character than the to areas to the west and south, and bounded by a near continuous rhyne defining a sub-rectangular enclosure. In 1515 <i>Beere</i> Survey Estbackweare is described as arable in the West Field of Godney.		
<b>East &amp; West Waste, and West Backwear</b>	intermediate	alluvium, fen peat
Area of intermediate character showing greater regularity in the east (West Backwear) than the west (East and West Waste, and Waterleaze). The first mention of <i>Waterleas</i> (Waterleaze) was in the <i>Beere</i> Survey of 1515 when it was described as pasture. The phrase 'The bounds of <i>Bacchyngwere</i> ' is referred to in 1351 ( <i>Wells II</i> , 617) though it is unclear whether any reclamation had occurred. In 1515 <i>Westbackweare</i> and <i>Estbackweare</i> (West and East Backwear to the south of Godney Hill), are described as arable in the West Field of Godney, which implies that quite a sizeable chunk of moor had been reclaimed.		
<b>Broadmead and Oxenpill</b>	Intermediate and irregular	alluvium
Area of irregular (Splotts) and intermediate (Broadmead and Westmead) landscape on the dryland between Meare and Westhay spreading onto the alluvium to the north, representing reclamation rooted on the fen-edge. Homeway Road (between Meare and Westhay) cuts through these fields. <i>Brodemedede</i> (Broadmead) and <i>Oxenpill</i> (modern Oxenpill) are first mentioned in the 1355 <i>Monington</i> Survey.		
<b>The Hammes (SE of Stileway)</b>	intermediate	alluvium
Area of intermediate character on the alluvium east of Meare island, representing a discrete reclamation. Documented from <i>Ford</i> Survey of 1260 as <i>Hammesmede</i> .		
<b>Honeygar (Westhay Level)</b>	intermediate	alluvium and peat
Area of intermediate character formed by a series of long axial boundaries parallel with the Brue. <i>Williams</i> (1970, fig. 12) shows this area as having been reclaimed c. 1400–1600 (though no evidence is given), but meadow and pasture at a place called <i>Henangre</i> or <i>Henacre</i> is documented from 1301/2 (SRO T/PH/Lon 2/14 11272), presumably Hennigans (now Honeygar Farm). The frequency of references to Hennigans in early 14 <sup>th</sup> century sources suggest that clarification of rights and dues was needed, perhaps because of active reclamation in the area between the islands of Westhay and Burtle. The field systems in the southern part of this area pre-date Heath Rhyne.		
<b>Meare and Westhay Heaths</b>	regular (longitudinal) with a series of variants	raised bog peat
Extensive planned landscape based upon closely-spaced axial boundaries and long, narrow fields. These boundaries appear to have run initially between the fen-edge and Paddock Rhyne, then Heath Rhyne (as far as Honeygar), and were finally extended, sometimes with a slight change of direction (most obviously to the SW of Westhay and SE of Meare), from Heath Rhyne to the parish boundary. Some of these long narrow fields were not enclosed further, while others were sub-divided both laterally and longitudinally (Fig. 5). <i>Williams</i> (1970, fig. 12) shows this area as having been reclaimed in the period 1640–1770, though no evidence is cited; in fact, references to meadow on the south side of Meare Island in 1355 (at Allen's Moor, Stileway, <i>Southeth</i> and <i>Hethmor</i> ) may represent the first stage of this reclamation: <i>Monington</i> : BL Egerton 3321). The Account Roll for 1343/4 describes 'waste' at <i>Hethmor</i> 'south of <i>Hamweye</i> ' [Hammes], 'outside the south part of <i>Henangre</i> ' [Honeygar], and 'outside the south part of <i>Halperyparoke</i> ' [Paddock Rhyne?].		
<b>Godney and Westhay Moors</b>	regular (rectilinear) with three variants	raised bog and fen peat
Extensive planned landscape based on a series of roughly north-south oriented roads and rhyne, and two roughly east-west oriented roads laid out concentric with the northern parish boundary. The blocks they define are sub-divided into a wide variety of rectangular fields, some of which are further subdivided into long, narrow plots; there is a less regular layout where the area between the outer-most axial roads and the parish boundary was enclosed (Fig. 5). Enclosed 1783 (SRO Q/RDe 125).		

in these documents (settlements, fields, meadows, canals, fish weirs etc), and then relating them to place- and field-names in the Tithe Map and Award of 1844 (Somerset Records Office SRO D/D/Rt 423), and the Brue Valley Drainage Map of 1806 (Fig. 4; Somerset Records Office SRO Q/Rde 121). Analysis of the field boundary patterns also suggests the processes by which different parts of the landscape were created, through the recognition of a series of 'historic landscape types' (Fig. 5; Table 1) each with a set of 'character defining features' (eg large open fields with long straight, narrow roads, in contrast to

small enclosed fields and sinuous roads with an abundance of roadside waste). Either individually or in combination with other types, these form 'historic landscape character areas' (Table 2) each of which results from a different process of landscape formation and evolution (eg large-scale planned drainage, in contrast to gradual, piecemeal enclosure; cf. Figs. 5–7). By determining when elements of these character areas came into being (through their identification in Glastonbury's medieval archives), the landscape can be reconstructed at different times (Fig. 7).



**Fig. 4.** The historic landscape of Meare as shown on the Brue Valley Drainage map, 1806. **A:** field boundaries. **B:** selected major landscape elements (including the probable maximum (winter) and minimum (summer) extents of Meare Pool), settlements, and named heaths/moors. The road between Meare and Glastonbury originally appears to have run along the southern bank of the canalised Brue, though the c. 1 km immediately east of the Manor House was later diverted south, up onto the island and through the former open fields (marked \*, and see Fig. 10).

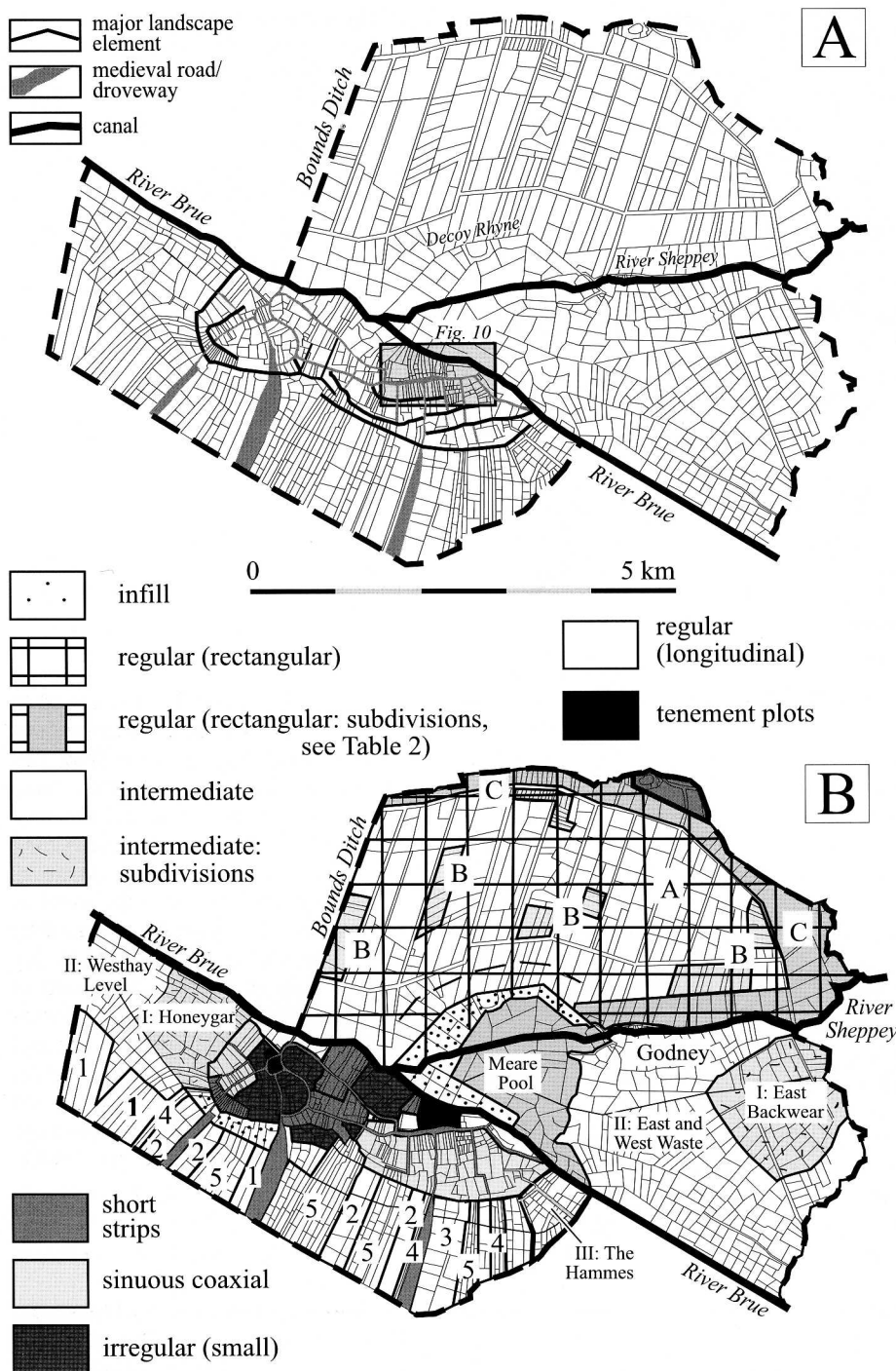
## Meare and the eastern Brue Valley

Meare is the largest of several bedrock islands lying within the wetlands west of Glastonbury (the others being Honeygar Farm and Burtle to the west, and Godney, Barrow Hill in Panborough, Fenny Castle, Marchey and Nyland to the north). There are broadly four major wetland deposits around Meare (Fig. 3C): raised bog and fen peats, and freshwater and estuarine alluviums. Before peat cutting, drainage, and desiccation, these peats would probably have been more extensive. The most recent deposits are freshwater alluviums, giving rise to soils of the Midelney Series, derived from rivers flowing off the adjacent uplands, particularly the Brue and Sheppey that were diverted through Meare during the medieval period (see below: Aalbersberg 1999, 42, 93; Aalbersberg et al. forthcoming; Avery 1955, 60–2; Findlay 1965, 122–3; Housley 1986;

1988; 1995; Housley et al. 1999, 41). In the palaeo-channel of the former Brue/Sheppey just south of the Panborough-Bleadney Gap, the onset of this sedimentation is dated to *very approximately* AD 1000 (Aalbersberg 1999, 93).

## Creating History: The significance of wetland islands in the 'Glastonbury Twelve Hides' (Fig. 8)

The early 'history' of Meare, as written by the monks at Glastonbury, reflects the special significance of this island set amongst its surrounding wetlands. Meare was amongst the original grants to Glastonbury Abbey in the late 7<sup>th</sup> century. The earliest reference is a forged charter of c. 670 that may contain some authentic



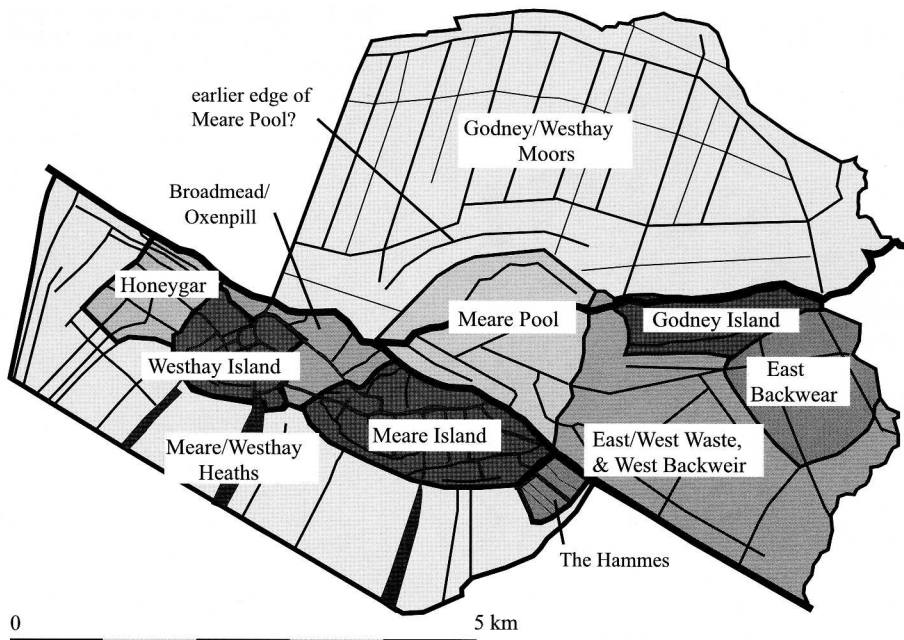
**Fig. 5.** Meare, historic landscape types, based on the landscape in 1806. **A:** field boundaries in 1806, with key landscape features highlighted including elements of the open field system south of the planned village in Meare and the series of droeways to the south across Meare and Westhay Heaths. **B:** historic landscape character types and sub-types (see Table 1).

elements (Sawyer 1968, No. 227; Abrams 1996, 169–71). The charter records a grant by King Cenwalh of Wessex to Abbot Beorhtwald of one *cassatum* at *Ferramere* [Ferlingmere, later Meare] with two small islands, woods, and a fishery. An authentic charter of 680 records a grant by Haedde, bishop of the West Saxons (at Winchester) of three hides at Leigh (in Street, near Glastonbury) and two *manentes* at Meare to Haemgils, Abbot of Glastonbury (Sawyer 1968, No. 1249).

These early grants of land at Meare are included in the 'Great Privilege of King Ine', a spurious 10<sup>th</sup> century charter that was intended to support Glastonbury's claim to a number of its estates. It purports to be a grant by King Ine in 725 to Glastonbury of various

lands, and a 'confirmation' of the 670 charter which this time specifies the 'islands' of Meare, Beckery, Godney, Marchey, and Nyland (Sawyer 1968, No. 250). This theme of Glastonbury creating its own history is continued into the 12<sup>th</sup> century through the creation of a special jurisdiction, the 'Twelve Hides', which enjoyed particular fiscal and jurisdictional privileges that were confirmed by Henry I in 1121 and Henry III in 1217 (Fig. 8; Morland 1984). This extensive area around Glastonbury had been granted to the Abbey in a piecemeal fashion through a series of charters dated c. 670–85, 712–18, and 955–75. In Domesday, manors that were part of the Twelve Hides included 'an island called Meare', 'another island called Panborough', and





**Fig. 6.** Meare, 'historic landscape character areas', based on the landscape in 1806 (and see Table 2).

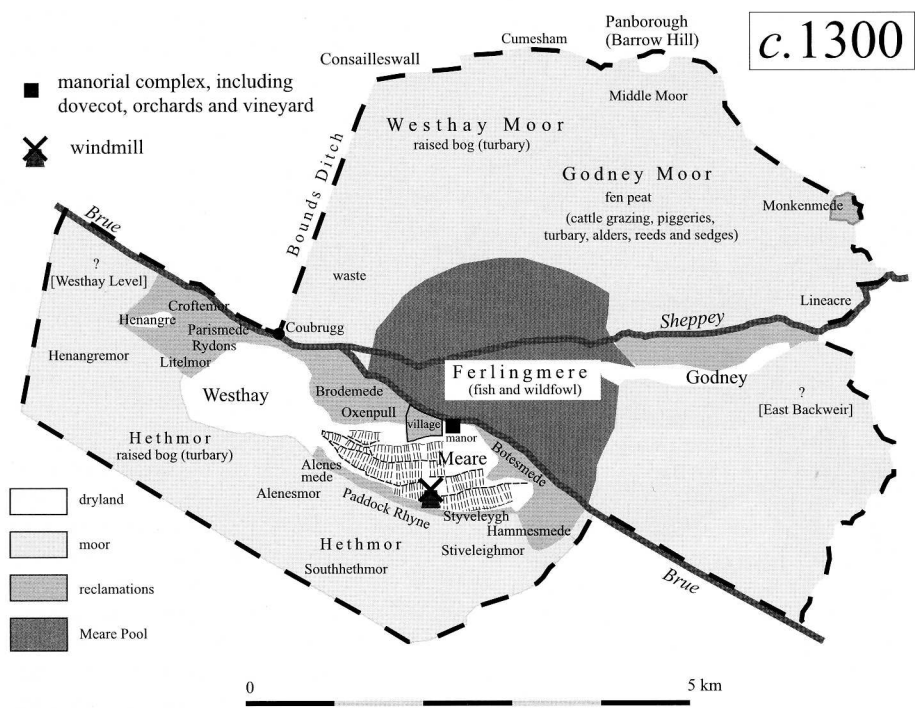
'a third island ...called Andersey' [Nyland Hill]. Other elements of what were to become the Twelve Hides had separate Domesday entries (eg West Pennard) suggesting that the concept of this jurisdiction was still evolving in the late 11<sup>th</sup> century, with its antiquity bolstered through the appearance of the forged 'Great Privilege' of Ine in *Malmesbury's* Early History of Glastonbury (c. 1129).

Although acquired in a piecemeal fashion, what became the Twelve Hides were essentially a dryland 'core' around Glastonbury itself (including West Pennard) and a large area of the wetlands in the Brue and Axe valleys. The inclusion of such extensive areas of poorly-drained wetland might at first appear curious, though it is notable that documents describing the Twelve Hides very carefully refer to the series of 'islands' that it contained (five actual bedrock islands, Godney, Marchey, Meare, Nyland, and Barrow Hill, along with two promontories referred to as 'islands' at Beckery and Bleadney). In the confirmation of Henry I (1121), for example, the list of properties starts: 'the village of Glastonbury, in which the Old Church of the Mother of God is located...along with the church's islands – Beckery, which is called Little Ireland, Godney, Marchey, Meare, Panborough, and Nyland – shall be freer than the other properties...' (*J. Glaston.*, No. 95). The dryland manors are listed later as if of secondary importance. In the list of 'Principle places within the Twelve Hides' even Glastonbury is described as an island (*Malmesbury*, No. 73).

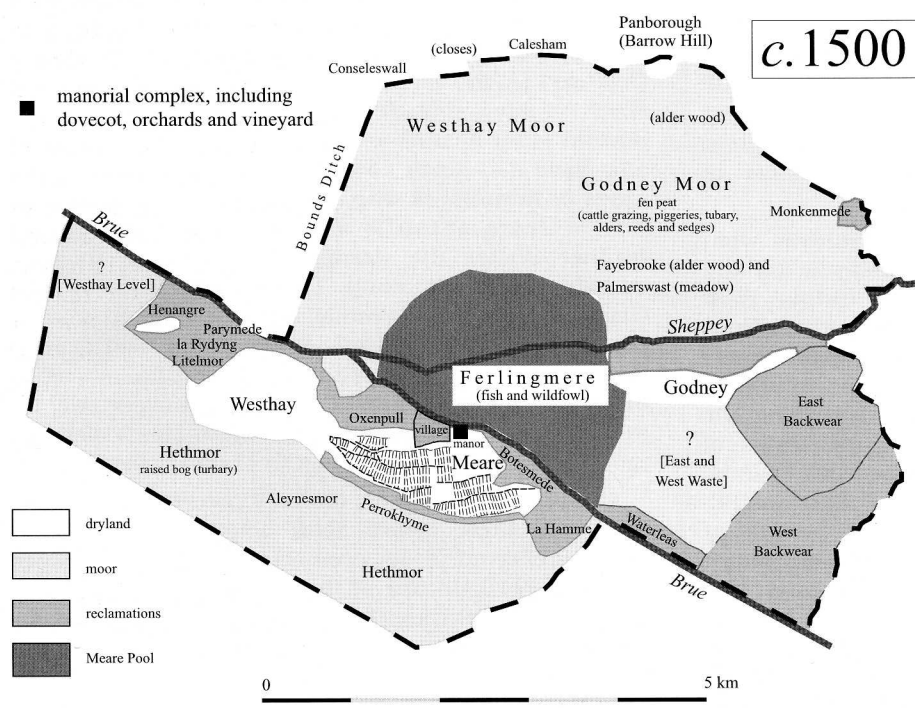
So what was the significance of these islands? It is notable that most if not all had associations with early Christian sites (*Aston 2000*, fig. 25; *Rahtz – Hirst 1974*, 11–12). Glastonbury Tor may now be interpreted as an early monastic site (*Rahtz 1991*), while nearby Beckery was occupied by a small monastic community associated with a cemetery (c. 7<sup>th</sup>/8<sup>th</sup> century?) (*Rahtz – Hirst 1974*). *Malmesbury* (No. 73) identifies Godney as having the chapel of the Holy Trinity. Marchey is

probably the 'small island' with a church mentioned in a charter of 712 (G.C. II, No. 640), and *Malmesbury* (No. 73) identifies the chapel of St Martin there (*Fig. 11*). *Collinson (1797)* mentions a chapel at Westhay 'long since ruined' though there are no earlier references. Several other islands within the Somerset Levels may also have had small pre-Conquest monastic communities or hermitages with Glastonbury at their centre. East of Meare, at Burtle, a 'priory' existed occupied by Brother Walter the hermit (G.C. I, 162): this lay outside the Glastonbury Twelve Hides, but within Glastonbury's *Pouholt* estate. Fenny Castle, in Wookey parish, is a small bedrock island remodeled around the 12<sup>th</sup> century to create a motte and bailey castle, but quarrying during the 19<sup>th</sup> century purportedly led to the discovery of 'upward of 20' inhumations, perhaps reminiscent of the cemetery at Beckery (*Holmes 1886*).

Of the various islands, and of those which had early Christian sites, Meare soon acquired the highest status, reflected as its promotion, sometime between 971 and 1170, to one of the 'Seven Churches' which Glastonbury held and had exemption from Episcopal and other ecclesiastical jurisdiction since the pre-Conquest period (*Malmesbury*, No. 60; *Carley 1988*, 21–2, 46). The other six – St John's Glastonbury, Street, Butleigh, Shapwick, Moorlinch, and Middlezoy – were all probably minsters for major estates and the promotion of Meare to this 'premier division' of Glastonbury's churches must reflect its prestigious history – real or invented. Meare is said to have had early religious significance as Abbot St Benignus allegedly established a hermitage there during the late 5<sup>th</sup> century, where he eventually died. His bones were transferred from Meare to the Abbey church at Glastonbury in 1091 (*J. Glaston.*, No. 86; *Malmesbury* 62, 86; *Carley 1985*, xxxviii; 1988, 14, 106). This is probably another story created to 'bolster cult-activity' at the Abbey, but again reflects the significance attributed to the Abbey's wetland islands (*Abrams 1996*, 170).



**Fig. 7.** Meare c. 1350 and c. 1500 showing selected landscape elements and areas of landuse.

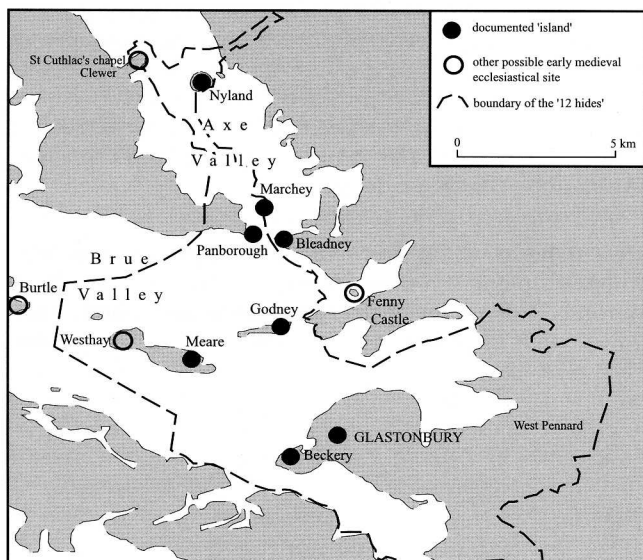


### The Seigneurial Complex, Planned Village and Open Fields

In addition to the mythical significance of Glastonbury's wetlands, and the islands within them, the Abbey's estates used water for economic benefit in a number of ways. Meare is again an excellent example. In contrast to Bishop's palaces (Thompson 1998), very few Abbot's country houses have been recognized/re-recorded, let alone studied in detail. The example at Meare is particularly well-preserved and included a seigneurial complex containing a manor house (Fig. 9),

church, dovecot, orchards, vineyard, and fishery (including the natural Meare Pool, artificial fishponds, and the Abbot's 'Fish House') (Ford, 203; J. Glaston. No. 139; Gray 1902, 41; Nesbitt 1853, 134, 134-5; Phelps 1836, 571; Pollard - Moyle 1539). The manor house has been surveyed by the Somerset Vernacular Building Research Group.<sup>2</sup> The large size of the hall (14.8 m by 6.9 m) suggests considerable scope for

<sup>2</sup> A survey and report on Manor Farmhouse, Meare by the Somerset Vernacular Building Research Group has been deposited in the Somerset Records Office, Taunton.



**Fig. 8.** The 'Glastonbury Twelve Hides', with the 'islands', and other places mentioned in the text (after Morland 1984, but including the St Cuthlac's chapel and the Clewer promontory, Hazel Hudson pers. comm.)

hospitality, and with the main entrance originally on the west side it is possible that the primary access from Glastonbury was via the canalized river Brue to the north of the house, rather than road access to the south (Fig. 10).

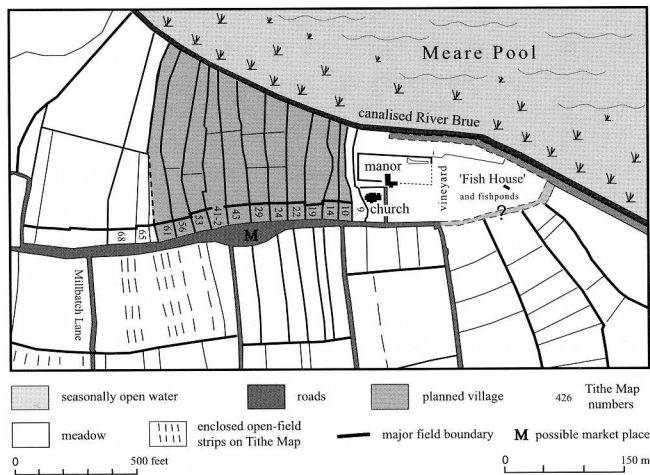
To the east of the church/manor complex lay a small planned village comprising a series of plots laid out from the main street down to the Brue (Fig. 10). Retrogressive analysis of the village plan (as mapped in the 19<sup>th</sup> century) suggests there were originally ten tenements, and interestingly the same number of fishermen are recorded in Domesday Book as living in Meare in 1086 (Rippon in press 2). Excavations have revealed occupation from the late 10<sup>th</sup>/11<sup>th</sup> century giving a *terminus ante quem* of that date for the initial planning (Hollinrake – Hollinrake 1993; Whitton – Reed 2002). Finds included small amounts of smithing slag,



**Fig. 9.** The church/manor complex (far right), and Abbots Fish House (isolated building centre left), lying on the edge of the island of Meare and immediately south of the canalised river Brue.

and a charred cereal assemblage dominated by wheat, along with some oats and peas/vetch. The weeds seeds are mostly indicative of dry arable land, but some are indicative of damp ground (water-plantain, hemp agrimony, sedge, rush, and bulrush), suggesting that either the cereals were in part grown on reclaimed land, or that the deposit also contained rush-based bedding material (Jones 2002).

South of Meare village, a series of roughly parallel east-west boundaries run the length of the island which appear to reflect the structure of a medieval open field system (the sinuous/coaxial landscape type: Fig. 5). The Tithe Map shows the survival of some unenclosed strips many of which appear to be in 'furlong'-like blocks, and in the 14<sup>th</sup> century the arable is recorded as having been worked within a two-field system (Keil 1964, tables A and 4). It would seem logical that these open fields were laid out at the same time as the village, though the date of this landscape replanning is unclear. It appears that Glastonbury reorganised its estates on the Polden Hills in the 10<sup>th</sup> century (Aston – Gerrard 1999). Abbot Dunstan may well have been responsible, as while in the years leading up to his abbacy Glastonbury was little more than an appendage to the royal demesne, he recovered and consolidated many lost lands, started rebuilding the church, and oversaw a spiritual revival (Abrams 1996, 7; Carley 1988, 10; Stacey 1972, 11). Palaeoenvironmental evidence lends some support to the idea that the landscape around Glastonbury was being exploited more intensively at this time. A pollen sequence from the moors north of Godney show a marked decline in dryland trees and increase in clearance herbs around the 10<sup>th</sup> century, while about the same time there was increased sedimentation in the Sheppey palaeochannel suggesting an increase in arable cultivation within its catchment (Aalbersberg 1999, 57–64, 93; Somerset County Council 1992). This trend of increased intensity in the exploitation of the Glastonbury region can also be detected in the very top of a pollen sequence from Meare Heath at c. AD 900 (Beckett – Hibbert 1979, 594).



**Fig. 10.** Plan of Meare village, with manor/church complex and Fish House, tenements plots (Tithe field numbers 9–68) of planned village, possible market place, and surviving traces of the open fields. The canalised river Brue runs to the south of Meare Pool whose extent would have fluctuated seasonally.

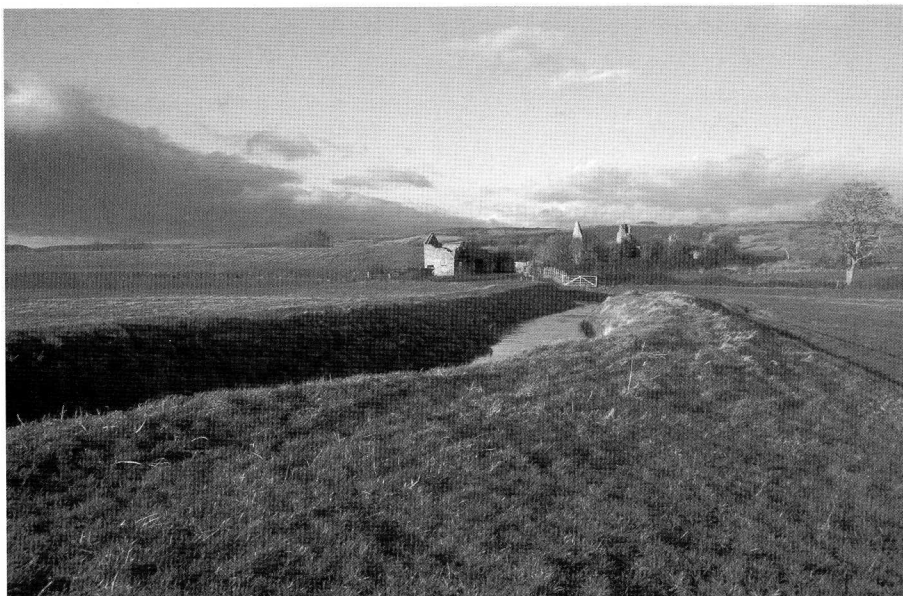
### The canalised rivers (Figs. 1, 3, 9, 11 and 13)

It was in the context of this increasing intensity with which the estates of Glastonbury Abbey were being exploited that we see the growing utilisation and manipulation of water around Meare. One manifestation of this was the canalisation of major rivers, as occurred elsewhere in medieval England (Blair forthcoming; Darby 1940 and 1983; Hall 1996, fig. 16; Hall – Coles 1994, 136–7). Glastonbury was initially linked to the Bristol Channel via the old course of the river Brue which originally flowed northwards through the Panborough-Bleadney Gap into the Axe Valley, past Cheddar, reaching the sea at Uphill (Figs. 1 and 3; Rippon forthcoming b). Its tributary, the Axe, flows from Wookey joining the 'old Brue' north of Marchey Farm. The 'old Brue' in the Axe Valley (now called the River Axe) was in places straightened and canalised, as shown for example in 1242/3 when it is recorded that

the Abbot had built banks on either side of the river in order to increase its depth, leading to a dispute with local commoners. The jury found that 'the bank is of old time, and that by the water channel alongside the bank, the abbot and his predecessors had a thoroughfare by their boats to go with their stone and their lime to the abbey' (Fig. 11; Pleas I, No. 818).

By the late 11<sup>th</sup> century or earlier, however, an alternative route between Glastonbury and the Bristol Channel had been established, as the River Brue was partially diverted via a major artificial watercourse that flowed past Meare to Burtle Moor where it divided into two: one channel (the Old Yeo) went north to Mark (where it now changes its name to Pilrow) and then northwards to Rooksbridge on the Axe; while another (now called the Brue) went directly west to the Bristol Channel at Highbridge (Fig. 1; Rippon forthcoming b). The date of the Brue's diversion is unclear, though John of Glastonbury's account of the carrying of St Benignus' bones from Meare to Glastonbury by boat on a river in 1091 describes the Brue in its current (redirected and canalised) position as far as Meare (Figs. 9 and 13; J. Glaston., No. 86).

Glastonbury canalised a number of other rivers, and these artificial waterways served several functions. The water levels within them were often higher than the ground through which they passed and so cannot have played a part in the drainage of these areas, though by carrying freshwater across them they helped to prevent flooding from upstream. These channels were, however, primarily designed to improve Glastonbury's communications, and the Abbey's use of these canals is well documented. For example, in addition to maintaining Pilrow, Robert Malerbe was also responsible for a watercourse between Clewer and Street (which must be the old course of the Brue: Fig. 1). As head boatman for the Abbey he was also responsible for transporting wine from the vineyards at Panborough, Pilton, and Meare, to Glastonbury; had custody of the waterways between Clewer and Street Bridge and between Mark



**Fig. 11.** The canalised and embanked river Axe just north of the Panborough-Bleadney Gap. Looking north towards the small bed-rock island of Marchey. Mendip in the background.

Bridge and Glastonbury; had to provide a boat to carry eight men, and acting as its coxswain to convey the abbot to Meare, Brent, Butleigh, Nyland, Godney, and Steanbow (near Pilton; *Fig. 1*); and to carry all the abbot's men and kitchen, including the movable kitchen gear and cooks, and his huntsmen and hounds (*Amesbury*, 176–8; *Grenville 1926*, 1–13). Just to the east of Pilton lies Doulling, from which fine quality stone was quarried for use not only at Glastonbury Abbey and Wells Cathedral, but also further afield (e.g. in Chepstow Castle: John Allen *pers. comm.*); it was logically shipped along either the canalised *Castellak/Sheppey* or *Hartlake* rivers, hence along the *Brue* and across the Severn Estuary. Pilrow also supported a water mill, at Rooksbridge. *Rokesmulle* is recorded in 1189, for example, when its value of 40 shillings made it Glastonbury Abbey's most valuable mill (*Holt 1987*). It also served as a transshipment point for goods being transported from Glastonbury to the open sea. In c. 1400, for example, a sea-going vessel foundered there, while in 1500, St John's church in Glastonbury used two boats to ship some seats from Bristol to Rooksbridge where they were transferred to 13 smaller vessels that sailed to Glastonbury via Meare (*C.L.P.M. VII*, No. 163; *Daniel 1895*).

### Meare Pool and the Meare fishery

By Domesday, the Somerset Levels supported the major concentration of fisheries in South West England (*Darby 1977*, 279–86; *Welledon Finn – Wheatley 1967*, 187). The largest was an extensive but fluctuating area of open water known as *Ferlingmere* (Meare Pool), an



**Fig. 12.** The 14<sup>th</sup> century Abbots Fish House, lying immediately east of the manor house. Looking north across Meare Pool which although now drained and reclaimed still suffers occasional winter flooding.

inland lake formed by water ponding-up behind the raised bog between Wedmore and the Polden Hills (*Fig. 3*; *Godwin 1955*).<sup>3</sup> The earliest reference to a fishery at Meare may be the charter of c. 670 (see above). At Domesday, Meare had three fisheries that paid 20 pence each, and ten fishermen listed along with just 60 acres of land and one plough (*DB 8, 1*). A number of fish weirs are also recorded on the rivers flowing across the



**Fig. 13.** The canalised river Brue (centre top), looking east across the now reclaimed moors and heaths of the Brue Valley towards Meare and Glastonbury. River House Farm on Mark Moor in foreground.

Levels. Documentary references suggest that these fisheries used both baskets and nets. In 1301/2, for example, there is reference to an area of moor at *Les Puttes juxta La Shirte* (Meare Account Roll: SRO T/PH/Lon 2/14 11272): 'Puttes' were large wicker baskets used to trap fish in rivers (*Losco-Bradley – Salisbury 1988*) or the intertidal zone (*Allen – Rippon 1997*; *Godbold – Turner 1994*; *Hilditch 1997*; *Nayling 1999*; *Turner 2002*). Nets were also used: in 1359, for example, the Bishop of Wells was accused of making weirs 'whenever they place "holies" [nets] and other instruments to catch fish there' (*Flower 1923*, 131–4), while in 1249, the abbot of Athelney complained about the seizure of his nets at *Burwere* in the Parrett near Barrow Bridge (*Wells I*, 86–7). Abbot *Beere's* survey of Meare refers to a 'Botehaye' (boat yard?) to the east of the manor house.

The centre of Meare's fishery appears to have been the Abbot's Fish House, set amongst a complex of fish ponds immediately to the east of the manor house (*Figs. 9, 10, and 12*). The 'Abbot's Fish House' is a two-

<sup>3</sup>The significance of such former inland lakes has been somewhat neglected: see *Coney 1992* for another example, in North West England.

storey stone building, 12.4 m long by 6.6 m wide, which appears to have had a residential function (on the two-celled upper floor), with the three-celled lower floor possibly used for preparing fish and storing tackle. The present structure appears to date to the 14<sup>th</sup> century, and its style is the same as that of the manor house and church chancel, possibly all being the work of Abbot Sodbury (*Gray 1926; Nesbitt 1853, 134*). Though the Meare fish house is now a unique survival, others must have existed in and around the Somerset Levels. Wells, for example, held a fish house at *Rodwere* beside the Pilrow Cut, which in 1378 was the subject of repairs costing 40 shillings (*Wells I, 285*). The survey of 1539 also refers to three fishponds at Meare that still survive (*Aston – Dennison 1988, fig. 3*). The fishponds would have allowed fish to have been bred and stored, though it is not clear whether fish were supplied to the Abbey live or preserved. In order to keep live fish fresh for the table, the kitchens at Glastonbury would have needed a system of tanks similar to those documented at Wookey, and excavated at Cumnor in Oxfordshire (*Hasler 1995, 4; Allen 1994*).

### The Moors (Figs. 7 and 13)

By the mid 14<sup>th</sup> century some 4–5 km<sup>2</sup> had been reclaimed around Meare, Westhay, and Godney islands, mostly on the alluvial soils around the northern side of the island, but also in limited intakes from the peat moors to the south (*Fig. 7*). The majority of the manor, however, was left as extensive areas of open unenclosed land known as the ‘heaths’ and ‘moors’. It is easy to assume that these unreclaimed wetlands were of little value, but their importance is illuminated in a lengthy (and now somewhat amusing) series of disputes between the Dean of Wells Cathedral and Abbots of Glastonbury. *John of Glastonbury* (No. 115) criticised the Abbots who ‘in their negligence had for a long time not entered the north moor of Meare – that is from *Lichelake* as far as the moors of Godney, which are within Glastonbury’s liberties – so that the monastery’s right was to some extent forgotten’ (and see *Pleas I, No. 572, Pleas II, Nos. 137, 144*). In 1272 there were allegations of trespass on the Dean’s manor of Mudgley and the Abbot’s manor of Meare (*Wells I, 226–8*). Agreement was finally reached with the Abbot permitted to maintain his fish weirs on the Brue and taking what they needed of the Dean’s soil for that purpose. The Abbot retained all the rights, including that of fishing, in Meare Pool and the Brue, although the Dean and his tenants were allowed to water their cattle there and travel across the water by boat during daylight hours. The Dean and the Abbot also retained rights of turbarry (peat cutting), alders, piggeries, and common pasture for cattle in each other’s moors.

This lengthy and detailed agreement did not, however, resolve the issue. In 1278, the abbot’s men destroyed a piggery belonging to the Bishop of Wells in Godney Moor (*G.C. I, No. 158*). In 1315 the piggery at Godney was destroyed again along with a fishweir on the Hartlake river, and the Bishop demolished some of the Abbot’s walls, dykes, and sluices in Blackford and

Mark Moors to the west of Wedmore (*C.P.R. 1313–17, 411–12, 412–13*). In 1326 Bishop Drokensford and Abbot Adam of Sodbury agreed to appoint three men to settle their disputed rights within the moors (*G.C. I, Nos. 157, 160*), but just four months later it was alleged that someone set fire to the Abbot’s peat moors between Burtle and Glastonbury, threatening the Abbey itself. The Bishop then excommunicated the Abbot after four of his men allegedly destroyed buildings on the Bishops moor of *Thealmoor* [Tealham Moor] (*Drokensford, 264, 271, 277, 279, and 153*). Only then was agreement finally reached over what were clearly very highly valued and extensively-exploited wetlands.

The disputes make reference to a number of wetland resources, but there were others. The significance of wildfowling may be indicated by the place-name ‘Henangre’ west of Meare (1301/2 Meare Account Roll: *SRO T/PH/Lon 2/14 11272*), *henn* suggesting wild bird, and *anger* suggesting pasture (*Smith 1956, 11, 242*). Meare was the only place within the jurisdiction of Glastonbury Abbey to have a heronry at the time of the Dissolution (*Wiglesworth 1918, 68–85*), and the survey of 1539 includes rights to swans, herons, and pheasants. The rich ecological mosaic of the Brue Valley backfens would also have offered a wide range of plant resources including alder trees for building timber, brushwood and sedges for fuel, and reeds for thatch (*J. Glaston., Nos 115, 117; Pleas I, No. 572*). The reference to ‘Lineacre’ in 1283 (and indeed ‘Liney’ in Sowy to the south of the Polden Hills, and ‘Linmoor’ in Wookey) implies the cultivation of flax on the moors (*G.C. II, 643; Sowy Court Roll: SRO T/PH/Lon 10682 2/23; Hasler – Luker 1997, map 6*). This was often grown on essentially unimproved marshlands due to the need for an abundance of water for retting (*Higham 1989, 42*). In the Netherlands, some communities in the peatlands specialised in flax cultivation (*Pals – Van Dierendonck 1988, 237–51*).

### The wetland farming economy

Early topographical writings (such as those discussed earlier) suggest that while it was recognised that wetlands can provide fertile arable land, they were particularly suited to meadow and pasture. This was certainly the case in Somerset. The exploitation of wetlands in Meare, both reclaimed and un-reclaimed, must be seen in the wider pastoral economy of Glastonbury (*Campbell 2000; Ecclestone 1996; Keil 1964*). The Abbey held estates across Somerset and its manors can be divided into three groups: firstly the mainly wetland manors centred on the islands of Meare with Godney, Brent and Sowy; secondly the Polden Hills and other manors that were essentially dryland but extended into the unreclaimed raised bogs and fen-peat of the Brue Valley and Kings Sedge Moor; and thirdly the wholly dryland manors of southern and eastern Somerset (*Fig. 2*). The pastoral element within the economies of the first two groups was dominated by cattle, while the dryland manors had sheep as a far greater proportion of the livestock. The essentially wet-

land manors had diverse cropping regimes including a significant proportion of legumes, whereas the Polden Hills and wholly dryland manors were dominated by the extensive cultivation of wheat and to a lesser extent oats (all the arable on the Polden Hills was on the dryland component of the manors). These differences are also reflected in the demesne landuse in c. 1300: the Polden Hills and other fen-edge manors had on average 64 % arable, 28 % meadow and 5 % pasture, whereas the wholly dryland manors averaged 69 % arable, 12 % meadow and 10 % pasture. Meare, by contrast had 46 % of its demesne sown as arable, 41 % meadow and 12 % pasture, though in practice the area of grazing available was much larger due to the common moors and heaths (Keil 1964, 75).

A distinctive element of the arable cultivation on those of Glastonbury's manors with the greatest area of wetland (Brent and Sow, and to a lesser extent Baltonsborough) was the extraordinary proportion of demesne land sown with legumes, mainly beans (Rippon forthcoming a). Beans were sometimes grown for consumption by seigneurial households and agricultural workers, for sale, and in order to replenish the soil, and in these cases they can be regarded as a cereal crop. In other agricultural regimes, however, they were primarily grown for fodder in which case they should be regarded as part of a pastoral regime and this was the case on the Somerset Levels. The four manors with relatively high proportions of the demesne sown with beans (c. 40 %: Brent, Sow, in Baltonsborough; and 100 % in Withy), along with Meare and Godney for which this cropping data is not available, also had Glastonbury's only significant herds of cattle, which were primarily for dairy production (Ecclestone 1996, 8). The Abbey's only swine herds were at Baltonsborough, Brent, Meare/Godney, Sow (the largest), and Walton, and the only horse studs were at Brent and Sow (Harrison 1997, 333; Keil 1964, 119).

Within the group of primarily wetland manors, the economy of Meare was particularly distinctive in that with Godney it had Glastonbury's major breeding herd of cattle. Over the period 1274-1315, for example, there were 56.7 calves born a year in Meare with Godney, compared to 32.9 in Baltonsborough, 29.6 in Brent and 20.0 in Sow (all other manors having c. 20 or less) (Ecclestone 1996, table 11m). Meare with Godney also had the largest dairy production of all Glastonbury's manors: in 1311/12, for example, it produced 631 cheeses, compared to 356 in Sow, 329 in Baltonsborough and 276 in Brent (other manors having c. 240 or less) (Ecclestone 1996, table 11c). These other manors had far larger areas of dryland/reclaimed land than Meare which once again serves to demonstrate that the unreclaimed heaths and moors around Meare and Godney must have provided excellent grazing land: reclamation was not necessarily required for a successful pastoral economy. There is, however, likely to have been a degree of seasonality in the exploitation of the wetland grazing, and the extensive movement of livestock around the Glastonbury estates is reflected in the series of droveways that can be identified in the field boundary pattern south of Meare (Fig. 5A).

## Conclusions

In this paper, the way in which one particular landowner, Glastonbury Abbey, manipulated its environment has been explored as a contribution to understanding the increasing intensity with which the English landscape was exploited during the medieval period. Key to this has been the careful integration of topographical information contained within the Abbey's rich historical records, with what survives of the physical fabric of the medieval landscape as preserved within the 'historic landscape' of today. Buried archaeology, standing buildings, palaeoenvironmental material and place-/field-name evidence have added to the story.

At the time of the Dissolution in 1539, Glastonbury Abbey was the wealthiest monastery in the country, and this prosperity reflects the extent and effective management of its resources. In part, these 'resources' were the material product of agriculture, along with the exploitation of natural resources such as Meare Pool, and the modification of the landscape for example through the canalization of rivers. Other resources were less tangible: Glastonbury was a major centre of pilgrimage and was a great 'marshaller of antiquity' (Crick 1991) most famously illustrated by the 'discovery' of the bodies of Arthur and Guinevere in 1191 soon after a disastrous fire left the monks in need of some quick cash. A century earlier the monks had moved the bones of St Begninus from the small island of Meare to the Abbey itself. Glastonbury lies at the end of a promontory that projects into, and dominates, the eastern end of the Somerset Levels that formed part of the Abbey's earliest estates. That what were to become the 'Twelve Hides' contained such vast expanses of wetland suggests that their value was not simply viewed in terms of their agricultural potential (which at that time would have been low): the association of each of the 'islands' and a number of promontories with early Christian sites suggests that this was a landscape which possessed, or was given, great symbolic significance. This too was exploited and managed by the monastic community.

The Abbey's, and its tenants', attempts at increasing the agricultural productivity of its land started early, and were sustained until the Dissolution. The planned village (and presumably the open fields) at Meare appear to have been in place by the late 10<sup>th</sup> century, and like the Polden Hills manors, may have been the work of the reforming Abbot Dunstan. It was also about this time that increased sedimentation within the rivers that flowed from the drylands around Glastonbury suggests an expansion of arable cultivation on the monasteries estates. In the post Conquest period, wetlands around the northern side of Meare island were drained, and these areas of predominantly meadow helped support what by c. 1300 was Glastonbury Abbey's most successful pastoral economy. It may have been precisely this emphasis on grazing that lessened the pressure to enclose and drain the remaining areas of moor. This variety of reasons, all associated with water and wetland resources, meant that Meare was one of Glastonbury's most important manors.

## Acknowledgements

I am extremely grateful to Mick Aston, James Bond, David Hall, Hazel Hudson, and Frances Neal for commenting upon an earlier draft of this paper, and to Richard Brunning, Martin Ecclestone, Charles and Nancy Hollinrake, Jane Penoyre of the Somerset Vernacular Building Research Group, and C. Whitton and Steve Reed of Exeter Archaeology for supplying unpublished information. I would like to thank Katrin Aberg and Johann Chaveau for translating my abstracts.

## Zusammenfassung

Besorgnis über Klimawandel und den Anstieg im Meeresspiegel haben zusammen mit den jüngsten weitläufigen Hochwässern in Europa uns daran erinnert, dass die Niederungsgebiete, von ausgedehnten Seemarschen bis zu den Flussauen des Inlandes, immer noch das Landschaftsbild vieler Regionen beherrschen. In einem Zeitalter intensiver Besiedlung und Landwirtschaft ist Wasser für uns oft ein Problem in diesen Landschaften, und komplexe Entwässerungs- und Hochwasserschutzanlagen werden angelegt, um ihren Wasserspiegel zu regulieren. In der Vergangenheit jedoch wurde Wasser als ein wertvoller Rohstoff betrachtet. Dieser Aufsatz ist ein Versuch diesen Umstand für eine mittelalterliche Niederungsregion, nämlich das Gutsgebiet Meare der Abtei Glastonbury in den Somerset Levels (Südwestengland) darzustellen. Zu diesem Zweck wird eine streng interdisziplinäre Forschungsarbeit genutzt, in der erstaunlich reichhaltiges dokumentarisches Material vereint wird mit dem Befund, der in die historische Landschaft eingebettet ist: die Verbreitung von Flurkomplexen, Straßenführungen, Ansiedlungen und Wasserläufen wie sie in den frühesten (frühes 19. Jahrhundert) kartographischen Quellen aufgezeigt sind und heute noch in vielen Fällen genutzt werden. Eine Reihe von 'Gebieten mit deutlichem Landschaftscharakter', die durch unterschiedliche Verfahren der Umweltnutzung entstanden sind, werden festgestellt. Das diese Niederungsgebiete hohen wirtschaftlichen Wert hatten, spiegelt sich in einer Reihe von bitteren Auseinandersetzungen zwischen Glastonbury und dem Dekan und Kapitel der Kathedrale von Wells über ihre respektiven dortigen Anrechte und in der Einbeziehung von Meare und einer Reihe von anderen Inseln in die spezielle Gerichtsbarkeit der Glastonbury 'Twelve Hides' wieder.

## Résumé

L'inquiétude au sujet des changements climatiques et de l'augmentation du niveau de la mer, ajoutés aux récentes inondations à travers l'Europe, nous rappelle que les 'terres inondables', allant des marais côtiers aux plaines inondables, dominent toujours le paysage de nombreuses régions. Dans une ère d'agriculture intensive, on considère souvent les eaux, sur de tel paysages, comme un problème, et des systèmes complexes de drainages et de protections ont été installés pour contrôler la quantité d'eau dans l'environnement. Cependant, dans le passé, l'eau était plus perçue comme une ressource, et c'est ce que cet article va essayer de démontrer, pour les terres de l'abbaye de Glastonbury, à Meare, dans le Somerset (Sud-Ouest de l'Angleterre). Une forte approche interdisciplinaire est utilisée, intégrant une riche documentation appuyée par des preuves provenant du paysage historique: la forme des champs, des rues, des installations et des cours d'eau, représentées par les anciennes cartes du début du 19ème siècle, et dans de nombreux cas, toujours utilisées de nos jours. Une série distinctive de 'zones caractéristiques du paysage' ont été identifiées, et sont dérivées de différentes approches de la gestion de l'environnement. Le fait que ces 'terres inondables' soient d'une grande valeur est reflété par une série de disputes entre Glastonbury et la Cathédrale de Wells pour leurs droits respectifs sur la région, et l'inclusion de Meare et d'une série d'autres îles faisant partie de la juridiction spéciale de Glastonbury 'twelve Hides'.

## References

- Amesbury:*  
1234/5 Survey of Abbot Amesbury (transcribed and published: *Elton 1891*).
- Beere:*  
1515 Survey of Abbot Beere (British Library Egerton 3034).
- BL:*  
British Library.
- C.P.R.:*  
Calendars of the Patent Rolls.
- C.I.P.M.:*  
Calendars of Inquisitions Post Mortem.
- DB:*  
Domesday Book (translated and published: *Thorn – Thorn 1980*).
- Drokensford:*  
1309–27 Bishop Drokensford's Register (transcribed and published: *Hobhouse 1887*).
- Ford:*  
1260 Survey of Abbot Ford (transcribed and published: *Elton 1891*).
- G.C. I:*  
Great Chartulary of Glastonbury Abbey vol. I (transcribed and published: *Watkins 1947*).
- G.C. II:*  
Great Chartulary of Glastonbury Abbey, vol. II (transcribed and published: *Watkins 1952*).
- G.C. III:*  
Great Chartulary of Glastonbury Abbey, vol. III (transcribed and published: *Watkins 1956*).
- J. Glaston.:*  
Joannis confratis et monachi Glastoniensis chronica, sive historia de rebus Glastoniensibus (transcribed and published: *Carley 1985*).
- Malmesbury:*  
c. 1129, De Antiquitate Glastonie Ecclesie (transcribed and published: *Scott 1981*).
- Monington:*  
1355 Survey of Abbot Monington (BL Egerton 3321).
- Pleas I:*  
Somersetshire Pleas, vol. I (transcribed and published: *Chadwyke-Healey 1897*).
- Pleas II:*  
Somersetshire Pleas, vol. II (transcribed and published: *Landon 1923*).
- Pollard and Moyle:*  
1539 Survey by Richard Pollard and Thomas Moyle, general surveyors of the king's lands' (*Phelps 1836*).
- PSANHS:*  
Proceedings of the Somerset Archaeological and Natural History Society.
- SRO:*  
Somerset Records Office.
- SRS:*  
Somerset Records Society.
- S.000:*  
*Sawyer 1968*.



**Sully:**

1189 Survey of Abbot Henry Sully (transcribed and published: *Stacey 2001*).

**Wells I:**

*Calendar of the Manuscripts of the Dean and Chapter of Wells*, vol. I (*Bird 1907*).

**Wells II:**

*Calendar of the Manuscripts of the Dean and Chapter of Wells*, vol. II (*Baildon 1914*).

**Bibliography****Aalbersberg, G. 1999:**

The Alluvial Fringes of the Somerset Levels. PhD Thesis, University of Exeter.

**Aalbersberg, G. et al. forthcoming:**

*Aalbersberg, G. – Brown, A. G. – Coles, B. J.:*

Palaeo-hydrology of Late Holocene flooding layers of the Brue Valley (Somerset Levels, Great Britain). *The Holocene*.

**Abrams, L. 1996:**

Anglo-Saxon Glastonbury: church and endowment. Woodbridge: Boydell Press.

**Abrams, L. – Carley, J. P. (eds.) 1991:**

The Archaeology and History of Glastonbury Abbey. Woodbridge: Boydell Press.

**Allen, J. L. R. – Rippon, S. J. 1997:**

Iron Age to Early Modern Activity and Palaeochannels at Magor Pill, Gwent: an exercise in lowland coastal zone geoarchaeology. *Antiq. J.* 77, 327–70.

**Allen, T. G. 1994:**

'A medieval grange of Abingdon Abbey at Dean Court Farm, Cumnor, Oxon', *Oxoniensia* LIV, 430–9.

**Aston, M. (ed.) 1988:**

Medieval Fish, Fisheries and Fishponds in England. Oxford: BAR Brit. Ser. 182i.

**Aston, M. 2000:**

Monasteries in the Landscape. Stroud: Tempus.

**Aston, M. – Dennison, E. 1988:**

Fishponds in Somerset. In: *Aston, M. (ed.):* 391–408.

**Aston, M. – Gerrard, C. 1999:**

'Unique, traditional and charming': the Shapwick Project, Somerset. *Antiquaries Journal* 79, 1–58.

**Avery, B. W. 1955:**

Soils of the Glastonbury District of Somerset (Sheet 296). Harpenden: Memoirs of the Soil Survey of Great Britain.

**Baildon, W. P. 1914:**

*Calendar of the Manuscripts of the Dean and Chapter of Wells*, volume II. London: Historic Manuscripts Commission/HMSO.

**Beckett, S. C. – Hibbert, F. A. 1979:**

Vegetational change and the influence of Prehistoric man on the Somerset Levels, *New Phytologist* 83, 577–600.

**Bird, W. H. B. 1907:**

*Calendar of the Manuscripts of the Dean and Chapter of Wells*, volume I. London: Historic Manuscripts Commission/HMSO.

**Blair, J. forthcoming:**

Water Transport and Management in Medieval England. Oxford: Oxford University Press.

**Bond, J. 1988:**

Monastic Fisheries. In: *Aston, M. (ed.):* 69–112.

**Bond, J. 2000:**

Landscapes of Monasticism. In: Hooke, D. (ed.): *Landscape: the richest historical record*. Birmingham: The Society for Landscape Study, 63–74.

**Bond, J. 2001:**

Monastic water management in Great Britain: a review. In: Keevill, G. – Aston, M. – Hall, T. (eds.): *Monastic Archaeology* (Oxford: Oxbow), 88–136.

**Brandon, P. F. 1971:**

Agriculture and the effects of floods and weather at Barnhorne, Sussex, during the late Middle Ages. *Sussex Archaeological Collections* CIX, 69–93.

**Campbell, B. M. S. 2000:**

*English Seigniorial Agriculture 1250–1450*. Cambridge: Cambridge University Press.

**Carley, J. P. 1985:**

The Chronicle of Glastonbury Abbey: An edition, translation and study of John of Glastonbury's 'Cronica sive Antiquitates Glastoniensis Ecclesie'. Woodbridge: Boydell Press.

**Carley, J. 1988:**

*Glastonbury Abbey*. London: Guild Publishing.

**Chadwyke-Healey, C. E. 1897:**

*Somersetshire Pleas*, volume I. SRS XI.

**Chandler, J. 1993:**

*John Leland's Itinerary*. Stroud: Alan Sutton.

**Coles, B. – Coles, J. 1986:**

*Sweet Track to Glastonbury*. London: Thames and Hudson.

**Collinson, J. 1797:**

*History of Somerset*, vol. 2. Bath: Crutwell.

**Coney, A. 1992:**

Fish, fowl and fen: landscape and economy on seventeenth-century Martin Mere. *Landscape History* 14, 51–64.

**Corcos, N. 2002:**

The affinities and antecedents of medieval settlement: topographical perspectives from there of the Somerset hundreds. Oxford: *British Archaeological Reports British Series* 337.

**Costen, M. D. 1991:**

Some evidence for new settlements and field systems in late Anglo-Saxon Somerset. In: *Abrams, L. – Carley, J. P. (eds.):* 39–55.

**Costen, M. 1992:**

*The Origins of Somerset*. Manchester: Manchester University Press.

**Crick, J. 1991:**

The Marshalling of Antiquity: Glastonbury's Historical Dossier. In: *Abrams, L. – Carley, J. (eds.):* 217–43.

**Daniel, W. E. 1895:**

The Churchwardens Accounts of St John's, Glastonbury. *Somerset and Dorset Notes and Queries* 4, 89–95.

**Darby, H. C. 1940:**

*Medieval Fenland*. Cambridge: Cambridge University Press.

**Darby, H. C. 1977:**

*Domesday England*. Cambridge: Cambridge University Press.

**Darby, H. C. 1983:**

*The Changing Fenland*. Cambridge: Cambridge University Press.

**Defoe, D. 1722–27:**

*A Tour through the whole Island of Great Britain (reprinted 1927, vol. 1)*.

- Donkin, R. A. 1958:*  
The marshland holdings of the English Cistercians before c. 1350. *Citeaux in de Nederlanden* 9, 262–75.
- Ecclestone, M. 1996:*  
Dairy Production on the Glastonbury Abbey Demesne 1256–1334 (unpub. MA Dissertation, Univ. of Bristol).
- Elton, C. J. 1891:*  
*Rentalia et costumaria*. SRS 5.
- Findlay, D. C. 1965:*  
The Soils of the Mendip District of Somerset (Sheets 279 and 280). Harpenden: Memoirs of the Soil Survey of Great Britain.
- Flower, C. T. 1923:*  
*Public Works in Medieval Law* (Seldon Society XL).
- Godbold, S. – Turner, R. 1994:*  
Medieval Fish Traps in the Severn Estuary. *Med. Archaeol.* 38, 19–34.
- Godwin, H. 1955:*  
Studies in the Post-Glacial History of British Vegetation XIII: The Meare Pool Region of the Somerset Levels. *Phil. Trans. Royal Soc. London, Ser. B*, 239, 161–90.
- Gray, H. St. George 1902:*  
Meare. *PSANHS* 48, 38–44.
- Gray, H. St. George 1926:*  
The Abbot's Fish House, Meare. *PSANHS* 72, xli.
- Grenville, R. N. 1926:*  
Somerset Drainage. *PSANHS* LXXII, 1–13.
- Hall, D. 1992:*  
The Fenland Project, Number 6: The South-Western Cambridgeshire Fens. *East Anglian Archaeology* 56.
- Hall, D. 1996:*  
The Fenland Project, Number 10: Cambridgeshire Survey, Isle of Ely and Wisbech. *East Anglian Archaeology* 79.
- Hall, D. – Coles, J. 1994:*  
Fenland Survey: An essay in landscape and persistence. London: English Heritage.
- Harris, K. 1991:*  
Glastonbury Abbey Records at Longleat House: a summary list. SRS 81.
- Harrison, J. 1997:*  
The composite manor of Brent: a study of a large wetland-edge estate up to 1350. Unpublished PhD thesis, University of Leicester.
- Hasler, J. 1995:*  
Wookey Manor and Parish 1544–1841. *Somerset Records Society* LXXXIII.
- Hasler, J. – Luker, B. 1997:*  
The parish of Wookey: and new history. Wookey Local History Group.
- Hasted, E. 1797–1801:*  
The History and Topographical Survey of the County of Kent, volume II, *reprinted* 1972. Wakefield: E. P. Publishing.
- Higham, M. C. 1989:*  
Some evidence for 12<sup>th</sup> and 13<sup>th</sup>-century linen and woollen textile processing. *Medieval Archaeology* XXXIII, 38–53.
- Hilditch, M. 1997:*  
Preliminary survey of coastal archaeology including the intertidal zone between Wains Hill (Clevedon) and Sand Point (Worle), North Somerset, *Archaeology in the Severn Estuary* 8, 99–102.
- Hobhouse, B. 1887:*  
Bishop Drokensford's Register, 1309–1327. SRS 1.
- Hollinrake, C. – Hollinrake, N. 1993:*  
An Archaeological Evaluation at 'The Laurels', Meare Hospital, Meare, near Glastonbury. Unpublished report, Somerset SMR PRN 15752.
- Holmes, T. S. 1886:*  
The History of the Manor and Parish of Wookey. Bristol.
- Holt, R. 1987:*  
Whose were the profits of milling corn? The abbots of Glastonbury and their tenants 1086–1350. *Past and Present* 116, 3–25.
- Housley, R. A. 1986:*  
The Environment of Glastonbury Lake Village. PhD Thesis, University of Cambridge.
- Housley, R. A. 1988:*  
The Environmental Context of Glastonbury Lake Village. *Somerset Levels Papers* 14, 63–82.
- Housley, R. 1995:*  
The Environment. In: Coles, J. – Minnitt, S. (eds.): *Industrious and Fairly Civilised: The Glastonbury Lake Village*. Taunton: Somerset Levels Project and Somerset County Museum Service, 121–36.
- Housley, R. A. – Straker, V. – Cope, D. W. 1999:*  
The Holocene peat and alluvial stratigraphy of the upper Brue Valley in the Somerset levels based on Soil Survey data of the 1980s. *Archaeology in the Severn Estuary* 10, 11–23.
- Jones, J. 2002:*  
Plant Macrofossil Assessment from the Laurels, Meare, Somerset. In: *Whitton, C. J. M. – Reed, S. D.*: 12–15.
- Keil, I. J. E. 1964:*  
The Estates of Glastonbury Abbey in the Later Middle Ages. Unpublished PhD thesis, University of Bristol.
- Landon, L. 1923:*  
*Somersetshire Pleas*, volume II. SRS XXXVI.
- Latham, R. E. 1994:*  
Revised Medieval Latin Word List from British and Irish Sources. Oxford.
- Lennard, R. 1955/6:*  
The demesne of Glastonbury Abbey in the eleventh and twelfth centuries, *Economic History Review* 8, 255–303.
- Lennard, R. 1975:*  
The Glastonbury estates: a rejoinder, *Economic History Review* 28, 517–23.
- Losco-Bradley, P. N. – Salisbury C. R. 1988:*  
A Saxon and Norman fish weir at Cowick, Nottinghamshire. In: *Aston, M. (ed.)*: 329–52.
- Lucas, G. 1998:*  
A Medieval Fishery on Whittlesea Mere, Cambridgeshire. *Med. Archaeol.* XLII, 19–44.
- McDonnell, R. 1980:*  
Tidal Fish Weirs, West Somerset. *PSANHS* 123, 75–82.
- Morant, P. 1763–8:*  
The history and antiquities of the County of Essex. *Reprinted* 1978. Chelmsford: Essex County Library.
- Morland, S. C. 1982:*  
The Saxon Charters for Sowey and Pouholt. *Somerset and Dorset Notes and Queries* 31, 233–5.
- Morland, S. C. 1984:*  
Glaston Twelve Hides. *PSANHS* 128, 35–54.

- Musgrove, D. 1997:*  
The medieval exploitation and reclamation of the inland peat moors in the Somerset Levels. *Archaeology in the Severn Estuary* 8, 89–97.
- Musgrove, D. 1999:*  
The Medieval Exploitation of the Peat Moors of the Somerset Levels. Unpublished PhD thesis, University of Exeter.
- Musgrove, D. 2001:*  
Modelling landscape development in a wetland environment: the medieval peat moors of the Somerset Levels. In: Raftery, B. – Hickey, J. (eds.): *Recent Developments in Wetland Research* (Dublin: Department of Archaeology, University College, Dublin, Monograph Series 2/WARP (Wetland Archaeological: Research Project Occasional Paper 14, 227–42).
- Nayling, N. 1999:*  
Medieval and later fish weirs at Magor Pill, Gwent Levels: coastal change and technological development, *Archaeology in the Severn Estuary* 10, 93–113.
- Nesbitt, A. 1853:*  
The Manor House, Meare, Somerset. *Archaeol. J.* X, 130–40.
- Pals, J. P. – Van Dierendonck, M. C. 1988:*  
Between flax and fabric: cultivation and processing of flax in a medieval peat reclamation settlement near Midwoud Prov. Noord Holland. *Journal of Archaeological Science* 15, 237–51.
- Phelps, W. 1836:*  
The History and Antiquities of Somersetshire, Vol. I. London: J. B. Nichols and Son.
- Postan, M. 1952/3:*  
Glastonbury estates in the twelfth century, *Econ. Hist. Rev.* 5, 358–66.
- Postan, M. 1956/7:*  
Glastonbury estates in the twelfth century: a reply, *Econ. Hist. Rev.* 9, 106–18.
- Postan, M. 1975:*  
Glastonbury estates in the twelfth century: a restatement, *Econ. Hist. Rev.* 28, 524–7.
- Rahitz, P. 1991:*  
Pagan and Christian by the Severn Sea. In: *Abrams, L. – Carley, J. P. (eds.):* 3–37.
- Rahitz, P. – Hirst, S. 1974:*  
Beckery Chapel, Glastonbury, 1967–8. Glastonbury: Glastonbury Antiquarian Society.
- Rippon, S. 1997:*  
The Severn Estuary: landscape evolution and wetland reclamation. London: Leicester University Press.
- Rippon, S. 2000:*  
Transformation and control: the management of coastal wetlands in North West Europe during the Roman and medieval periods. London: British Academy.
- Rippon, S. 2001:*  
Reclamation and regional economies of medieval marshland in Britain. In: Raftery, B. (ed.): *Recent Development in Wetland Research*. Dublin: University College Press, 139–48.
- Rippon, S. 2002:*  
Infield and Outfield: The Early Stages of Marshland Colonisation and the Evolution of Medieval Field Systems. In: Lane, T. – Coles, J. (eds.): *Through Wet and Dry: Essays in honour of David Hall*. Sleaford: Lincolnshire Archaeology and Heritage Reports Series No. 5, 54–70.
- Rippon, S. forthcoming a:*  
Fields of Beans and Flocks of Sheep: the perception of wetland landscapes during the medieval period. In: Bell, M. – Boardnar, J. (eds.): *Landscape changes over archaeological timescales*.
- Rippon, S. forthcoming b:*  
Waterways and Water Transport around on Reclaimed Coastal Marshlands: the Severn Estuary and Beyond. In: Blair, J. (ed.): *Water Transport in the Middle Ages*.
- Rippon, S. in press 1:*  
*Historic Landscape Analysis*. York: Council for British Archaeology.
- Rippon, S. in press 2:*  
Making the most of a bad situation? Glastonbury Abbey, Meare and the medieval exploitation of wetland resources in the Somerset Levels. *Medieval Archaeology* XLVIII (2004).
- Sawyer, P. H. 1968:*  
*Anglo-Saxon Charters: an annotated list and bibliography*. London: Royal Historical Institute.
- Scott, J. 1981:*  
The Early History of Glastonbury. An edition, translation and study of William of Malmesbury's *De Antiquitate Glastonie Ecclesie*. Woodbridge: Boydell Press.
- Smith, A. H. 1956:*  
*English Place-Name Elements, Part 1*. Cambridge: Cambridge University Press.
- Smith, R. A. L. 1943:*  
Canterbury Cathedral Priory: a study in monastic administration. Cambridge: Cambridge University Press.
- Somerset County Council 1992:*  
A Palaeoenvironmental Investigation of a Field off White's Drove, Godney Moor, Near Wells, Somerset: Interim Report. Taunton: unpublished report, Somerset County Council Environment Section.
- Stacey, N. E. 1972:*  
The Estates of Glastonbury Abbey c. 1050–1200. Unpublished PhD thesis, University of Leeds.
- Stacey, N. E. 2001:*  
Surveys of the estates of Glastonbury Abbey, c. 1135–1201. London: British Academy.
- Stone, D. 1998:*  
Management of Resources on the Demesne Farm of Wisbech Barton, 1314–1430. Unpublished PhD thesis, University of Cambridge.
- Thompson, M. 1998:*  
*Medieval Bishop's Houses in England and Wales*. Aldershot: Ashgate.
- Thompson, M. G. 1997:*  
The Polden Hill Manors of Glastonbury Abbey: land and people circa 1260 to 1351. PhD thesis, University of Leicester.
- Thorn, C. – Thorn, F. 1980:*  
*Domesday Book: Somerset*. Chichester: Phillimore.
- Toulmin Smith, L. 1906:*  
The Itinerary of John Leland in or About the Years 1535–1543, vol. 1. London: Bell.
- Turner, R. 2002:*  
Fish Weirs and Fish Traps. In: Davidson, A. (ed.): *The coastal archaeology of Wales*. Cardiff: Cadw, 95–107.
- Watkins, D. A. 1947:*  
The Great Chartulary of Glastonbury, volume I. SRS LIX.

*Watkins, D. A. 1952:*

The Great Chartulary of Glastonbury, volume II. SRS LXIII.

*Watkins, D. A. 1956:*

The Great Chartulary of Glastonbury, volume III. SRS LXIV.

*Welledon Finn, R. – Wheatley, P. 1967:*

Somerset. In: Darby, H. C. – Welledon Finn, R. (eds.): The Domesday Geography of South-West England. Cambridge: Cambridge University Press, 132-222.

*Whitton, C. J. M. – Reed, S. 2002:*

Archaeological Recording at 'The Laurels', 60B St Mary's Road, Meare, Somerset. Exeter Archaeology Report 02.52; copy in Somerset Sites and Monuments Record PRN 15772.

*Wiglesworth, J. 1918:*

The Heronries of Somerset. Proceedings of the Somerset Archaeological and Natural History Society 64, 68-85.

*Williams, M. 1970:*

The Draining of the Somerset Levels. Cambridge: Cambridge University Press.

*Young, A. 1804:*

General View of the Agriculture of the County of Norfolk. London: Board of Agriculture; reprinted 1969. Newton Abbot: David and Charles.