

## **Historical Journeys along the Rivers of East Norfolk – The Rivers Yare, Wensum, Waveney & Bure**

### **Synopsis**

The document describes virtual journeys along 4 rivers of East Norfolk, namely the Rivers Yare, Wensum, Waveney and Bure; the perspective is historical against the background of the current scene. Significant tributaries joining the rivers have also been tracked back to their start-points, and general aspects of the river catchments are considered. Particular attention is given to bridges and watermills because of their intimate associations with the river, but other nearby buildings, both religious and secular, also feature. People of note have been associated with the river, and brief biographical notes are provided, where thought appropriate. Norwich is the only city encountered, but there are other substantial towns on the rivers; they are not fully described but attention is given to the parts close to the rivers. The term 'virtual journey' is used because the account comprises descriptions of places, many of which have been visited, but they are not in general linked by accounts of walks along the river banks. The rivers have been followed at greater and lesser distances by car, but the information gathered from site-visits has been augmented by desk top surveys, to provide continuity.

As regards watermills, Alastair Robertson's Appendices attached to the accounts of each river, list the commercial watermills\*, and farm mills in the catchment, and locate the former on sketch maps and wherever possible specify their functions.

*\* a commercial watermill is paid by customers to process raw materials like grain or wool, differentiating them from any farm mill, a machine located on a farm, which operates at the behest of the farmer, normally without money changing hands.*

**Access to the individual river journeys is gained by clicking on the links below, while the general introduction, an addendum summarising the lists of watermills, and a short bibliography follow.**

1. [River Yare](#)
2. [River Wensum](#)
3. [River Waveney](#)
4. [River Bure](#)

## **Historical Journeys along the Rivers of East Norfolk – The Rivers Yare, Wensum, Waveney & Bure**

### **Introduction**

Before embarking on the journeys proper, they will be briefly set in context, within a project, which has put together accounts of 51 river journeys. The starting point was an exercise to describe virtual journeys along the relatively small rivers in the Lothians, around Edinburgh, the native city of my brother, Alastair Robertson, and myself, who have collaborated on the project. Alastair put together the information on watermills, whereas I have taken the main responsibility for producing accounts of the river journeys. From there the project has grown, without really changing the aspects of rivers, on which we have focussed, namely broad patterns of landscape, historical man-made artefacts, people of note with strong associations, and commercial and transportation developments. On the other hand, limited knowledge, and a desire to maintain coherence, has meant that our treatment of the natural world, the plant and animal life in the river valleys, has been cursory, as has been our consideration of leisure pursuits, from boating to fishing. We have been fairly disciplined in staying within the river catchments concerned, but have allowed ourselves occasional excursions to interesting nearby sites; we have stuck close to rivers, as they passed through large towns and cities, to avoid accounts becoming inferior guide books. Mostly, we have used information gathered during visits, backed by an extensive desk top exercise, consulting maps, books and the internet, though in a few cases we have benefitted considerably from local knowledge supplied by correspondents.

It was always appreciated, that bridges, and watermills would deserve special attention, as uniquely associated with rivers, and as we expanded the project, the work on watermills, assumed greater prominence. Homing in on the commercial mills, which operated after 1750, sketch maps were produced, locating them, along with tabulations, which specified their types, e.g., cornmills, textile mills, etc. The date was selected, because although viewed nationwide, there is much available information on mills operating before then, it is patchy, and thus not amenable to analysis. We produced accounts of the East Norfolk rivers, quite early in the project, and have considerably refined the techniques for identifying watermills since then. In particular, methodologies were developed to identify farm mills, mainly threshing mills, marked on old British maps digitised by the National Library of Scotland (nls), so allowing fuller accounts of all of the milling installations. In a number of cases, these developments have caused us to revisit early versions of the documents, revising the appendices dealing with watermills, and we have taken the opportunity to make some changes to the accounts of the river journeys.

However, we had access to the excellent Norfolk Mills website from the start of our investigations, along with the maps mentioned above, so it was unlikely, that revisiting Alastair Robertson's analysis of commercial watermills on the rivers and their main tributaries would unearth many additional installations, but the exercise has been carried through, for all the river catchments. As for farm mills in the East Norfolk river catchments, we initially had some indications that there would not have been many, and we were able to surmise why that might have been the case. However, we were wrong in that, and a proper analysis of the nls maps, has yielded evidence for many farm mills in the catchments, and the Appendices in the accounts for the 4 rivers itemise and locate them. Unfortunately, we have not found additional information, of the type obtained for other areas of the country, which allows greater certainty that farm mills are indeed present, and in some cases at least, specifically identifies types, such as threshing mills and gorse mills. Another confusing aspect has been the profusion of ponds in the catchments, referred to in other contexts, which has made separating out the

possible mill ponds, a difficult exercise, but with the aid of other probable markers like lades, and our other tests, we hope to have identified the most likely candidates. Essentially these comments reflect reduced confidence, that a farm mill will have stood on any specific site, but that there are so many such sites, that there must have been a very considerable number of farm mills. We do think this identification of a large number of possible sites is a major advance on information presented previously, but would welcome more tangible evidence of past farm mill installations in the catchments. In passing, we have seen no evidence that wind, which has been harnessed to power so many commercial corn mills, has been used to drive any farm mills. By c1850, steam powered threshing machines had been developed, and they were soon made portable; they probably were used in Norfolk, but could not readily be detected on the early edition OS maps of Norfolk. So, in summary, we now present information on locations and types of commercial and farm water mills in the 4 river catchments of East Norfolk, in the period after 1750.

Returning to other considerations, the landscape through which the rivers flow, is as always strongly influenced by the underlying rocks. Taking a broad brush view, the rivers begin their courses above a wide band of limestone, which runs north-east from the Downs in southern England, but eventually they move into another north/south band, this time of sandstone and marls. At the end of the Ice-Age, 11000 years ago, as glaciers retreated, they left moraines of gravels and other rocks brought from elsewhere, in this case including flints. More recent depositions have been of peat, and have affected the landscape, as humans have dug out the deposits, thus doing much to create the Norfolk Broads, and more recently, gravel and sand, has been excavated so forming many more ponds and lakes. All the rivers are chalk streams for most of their lengths, flowing in wet grass-covered landscapes between low rolling hills, away from each bank. It is only in the lower reaches that Norfolk fully lives up to its flat reputation, with drainage ditches on each river bank, replaced nearer the sea, by the Broads.

The project has involved following the courses of the East Norfolk rivers, which discharge their contents by way of Breydon Water, near Great Yarmouth, into the North Sea. That simple statement hides an aspect which seems to be mildly contentious. Certainly, older maps show the River Yare, having taken in the contents of the River Waveney, continuing through Breydon Water and emerging from its north-eastern shore. The river is then joined on the left bank by the River Bure, and swings south between Great Yarmouth on the left bank, and Gorleston on the right bank, before turning east again to enter the North Sea. By this reckoning, the Rivers Waveney and Bure are tributaries of the River Yare, and the town of Great Yarmouth is indeed at the mouth of the river, from which it takes its name. Modern maps and some descriptive accounts seem to extend Breydon Water to the sea, so treating it as an estuary into which the three above-mentioned rivers flow. Obviously, this does not matter greatly, but as our main purpose is historical, we shall consider the River Yare as flowing all the way to the sea. This short discussion has resulted in the naming of 3 of the rivers, which are treated separately, namely the Yare, Waveney and Bure, and the fourth dealt with in this way, is the River Wensum, a tributary of the River Yare by convention, but actually, much the larger river. There are other tributaries, and they will be considered, as we move along the main rivers from source to mouth, where we arrive at the relevant confluences. We do not treat the Broads in detail, limiting ourselves to brief comments, and to giving an indication of where their meres and other waterways intersect with the rivers. Access to the accounts of the river journeys, is gained by clicking on the name of interest, as it appears below the Synopsis on the previous page.

The journeys have been in an important sense virtual, in that neither of us have tramped for significant distances along the river banks. There are walkways, like the Wherryman's Way beside the River Yare, which have been followed for short stretches, but for the most part, the rivers have been followed on maps and satellite views, to identify sites of interest, many of which had been visited before the project began, over more than 30 years, because friends in the area, Mr. & Mrs. Andy Moore had taken one of us to a significant proportion of the most interesting places. Where gaps became obvious, a few further planned visits took care of most of them, though occasionally, there proved to be no way of getting a desired view, usually because the site concerned is private, which status has been respected by doing no more than mentioning the building of interest. Where access is available occasionally or conditionally, we have sometimes used photographs from the Internet, usually acknowledging their provenance. In rather fewer cases, usually near sources of rivers, points of interest were not reached, and again any available photographs have been used; should there be objections to our use of any such material, we shall seriously consider its removal, if contacted by way of our website. Many documents, including books, monographs and published learned papers have been consulted and those, which have been helpful, are either indicated at the point of reference in the text, or are listed in the short bibliography which appears after this introduction, but it is right to highlight the relevant Pevsner and Arthur Mee 'King's England' volumes, which have been indispensable, and can be used to fill out many of the short accounts presented here. Although it is at least half a century since they were published, this is not of great moment for historical journeys, provided that the continuing existence of any buildings has been confirmed. Maps on the National Library of Scotland website, maps.nls.uk have given a 19<sup>th</sup> century baseline to historical enquiries and have been a key tool for identifying the sites of water mills.

The places described are all fairly near to the rivers in question, and although the occasional detour has been made, especially in riverside towns, the catchment has rarely been left. The aim has been to keep the rivers and their tributaries central to the narrative, rather than using them as a vehicle for a wider study of the lands around them. The city of Norwich presented something of a dilemma, given that there was no desire to add another, less comprehensive, guidebook to the many which already exist. So, the accounts stay particularly close to the Rivers Yare and Wensum when tracking them through and around the city.

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**Addendum – see next page**

A1. On revisiting this document, after enhancing the accounts of the separate river journeys, we realised that it would be worth summarising the increased amount of information made available about water mills. The Table, which follows, is the result, and to it has been added information on two small North Norfolk rivers, the Glaven and the Stiffkey, which have been investigated, since the initial results for the East Norfolk rivers were posted. We have also included a small Table giving the number, 20, of horse gins in the catchments; they were farm mills, probably mainly powering threshing machines.

### Summary of Mills found in Six Norfolk Catchments

Mill Type	Number of Mills in Catchment						
	Yare	Wensum	Bure	Waveney	Stiffkey	Glaven	All Catchments
<b>Commercial</b>							
Corn	19	20	20	14	2	6	81
Animal Feed	0	2	1	1	0	0	4
Brewery	0	0	0	0	0	1	1
Textiles	2	2	2	3	0	0	9
Paper	2	5	1	1	0	0	9
Saw	2	2	1	0	0	0	5
Bone	0	1	2	0	0	0	3
Mustard	1	0	0	0	0	0	1
Tannery	0	1	0	0	0	0	1
<b>All Commercial</b>	<b>21</b>	<b>22</b>	<b>24</b>	<b>14</b>	<b>2</b>	<b>6</b>	<b>89</b>
<b>Farm Mills</b>	<b>67</b>	<b>29</b>	<b>22</b>	<b>35</b>	<b>3</b>	<b>6</b>	<b>162</b>

Catchment	Horse Gins
Yare	9
Wensum	2
Bure	5
Waveney	3
Stiffkey	0
Glaven	1

Notes;

1. Some mills had more than one function over time, and/or sometimes, separate waterwheels carried out separate tasks in the same mill. As a result the numbers in columns, which relate to functions, do not add up to equate to the total numbers of water mills.
2. It is no surprise in a county of much arable farming that there is a predominance of corn mills, but it is perhaps surprising that there were not more performing other tasks. In particular, no other specialities grew up along any of the rivers, except arguably, papermills near Norwich, and there appears to be none that would be classed as having heavy industrial functions.
3. In other areas of the country, we have found the ratio of the number of farm mills, usually predominantly threshing mills, to commercial corn mills, in any catchment, a useful measure of the penetration of that technology. However, in Norfolk, there are very many more windmills grinding corn, than watermills, so to relate numbers of farm/threshing mills only to the number of the latter would give a totally misleading impression.

Viewed purely qualitatively the penetration of threshing mill technology into the Norfolk catchments is certainly less than in most of the other areas of the country, which we have investigated.

4. Notwithstanding the above, we have been surprised by the number of possible sites of farm mills, which we have found. We refer to greater uncertainties than in other catchments in the individual river Appendices. We have no quantitative information about types, but are confident that the great majority are threshing mills, with a few processing gorse for animal feed, and possibly a very few cider mills. The horse gin numbers can be added to the farm water mill numbers, with functions following a similar pattern.

5. Many of the commercial watermills operated in tandem with windmills, and a substantial number were boosted by steam engines from the mid-19<sup>th</sup> century onwards. Of those which survived to the later 20<sup>th</sup> century, a few were converted from water power to electric power.

A2. It is disappointing that so few old bridges still cross the rivers (my criterion is pre-1700). There are 2 in the River Yare catchment, 1 in the River Wensum catchment, none in the River Waveney catchment, and 3 in the River Bure catchment; 6 in all.

A3. It is worth remembering that Norfolk is a dry county, with the annual rainfall in Norwich 629mm, compared with the English average of 855mm. Given that fact, it is perhaps surprising that there is so much water to be seen around each of the rivers, though much of it can be described as standing in old sand and gravel pits, ponds, and meres, rather than flowing in ditches and drainage channels. Nonetheless, at Yarmouth, the mean discharge rate by the River Yare of 162000 gallons per minute, is substantial for an east coast outflow.

## Short Bibliography

Title	Author (s)	Publisher	Date
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Rivers of East Anglia	Turner J.	Cassel & Co. Ltd.	1954
Water and Wind Power	Watts M.	Shire	2005

## Websites

Site	Comment
<a href="http://britishlistedbuildings.co.uk">britishlistedbuildings.co.uk</a>	
<a href="http://pastscape.org.uk">pastscape.org.uk</a>	English historic buildings
<a href="http://maps.nls.uk">maps.nls.uk</a>	Historic maps
<a href="http://drtomsbooks.files.wordpress.com">drtomsbooks.files.wordpress.com</a>	My own gazetteer of ancient bridges
<a href="http://british-history.ac.uk/vch/norf/">british-history.ac.uk/vch/norf/</a>	British history on line
<a href="http://en.wikipedia.org">en.wikipedia.org</a>	
<a href="http://ceh.ac.uk/index">ceh.ac.uk/index</a>	Hosts the National River Flow archive
<a href="http://norfolk Mills.co.uk">norfolk Mills.co.uk</a>	Exceptional source of information

In the course of the project, we have read guidebooks acquired during visits to historic sites, and consulted many local websites. Information has been extracted, but text has not been copied. We are keen to thank those who have made available, so much, that is interesting.