RIVER TRANSPORT 1189 – 1600

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SUMMARY

The purpose of this thesis is to establish the extent of river transportation in the period 1189 - 1600. Investigation is made as to which rivers were physically usable, which were legally usable and the comparative cost of land and river transport. The evidence of historic use is examined and these records are compared with the recent limits of use of the rivers. Hence an estimate is made as to which sections of rivers were probably used during that period.

The principles of fluvial geomorphology have been used to estimate past channel changes. The legal records have been studied and analysed. Considerable evidence of the use of rivers has been found which materially increases the lengths of rivers for which there are records of historic use.

It is concluded that:-

1. all rivers which were physically usable were legally usable,
2. there is a high probability that each section of a river which is now physically usable was usable by small boats in the period 1189-1600,
3. on the balance of probabilities each section of a river which is now physically usable was used during that period.

Finally the implication of this research for the present day law relating to public access on rivers is considered.

Certificate relating to Work submitted elsewhere for Examination

D.J.M. Caffyn. River Transport 1189 – 1600.

I hereby declare that this thesis has not been and will not be, submitted in whole or in part to another University for the award of any other degree.

However this thesis includes at Appendix D a list of Rivers made navigable by Act of Parliament. This is a corrected and reworded version of Appendix A of a Dissertation for the Degree of Master of Laws by Research at Kent Law School, the University of Kent, submitted in August 2004.

Appendix E includes a summary of the statutes for removing weirs and other obstructions from rivers. This material was also formed part of Section 2.6 of the above mentioned thesis.

…….. D.J.M. Caffyn.

…….. Date.

CONTENTS

Part 1 Introduction

Part 2 The Physical Usability of Rivers

Volume 2. Appendices

Tables

Graph

Illustrations

(The illustrations are not included in the electronic edition of the thesis.)

Referencing Style

In general the Harvard style has been used but due to the large number of footnotes it has been augmented as follows:

There are three texts which have been quoted so frequently that they are considered to be standard texts on their topics. Footnotes have not been entered because they are self-indexing.

Edwards. J.F. Edwards, 'The Transport System of Medieval England and Wales.' Unpublished PhD thesis. University of Salford. 1987.

BCU Guide. The British Canoe Union, *The Guide to the Waterways of the British Isles.* Weybridge: British Canoe Union. (1st Edition 1936.) 1980.

Hydrological data UK. Centre of Hydrology and Ecology, British Geological Survey. *Hydrological Data UK. Hydrometric Register and Statistics 1996-2000.* Wallingford: Centre for Ecology and Hydrology. 2003.

In the footnotes the most frequently quoted references have been abbreviated:-

Blair 2007. John Blair, Editor, *Waterways and Canal-Building in Medieval England.* Oxford: Oxford University Press. 2007.

PROME The Parliamentary Rolls of Medieval England. 1272 – 1504. (CD Version 2005.)

TNA The National Archives.

Abbreviation

For the purpose of comparing historic use with present day use the comparator used throughout the thesis is:

RLU. Recent limit of use as given in the *BCU Guide*, first published 1936, but amended to exclude sections of rivers where the river has numerous rapids with fairly high irregular waves, eddies and whirlpools.

Units

In accordance with the normal British practice distances are measured in miles. All other quantities are measured in metric units except where another author's work is quoted where the original units are retained.

List of Notations

Chapter 2.3

Runoff	R
Precipitation	P
Evapotranspiration.	E
Time	subscript a and b
Fractional increase in precipitation	x
Fractional evopotranspiration	y
Discharge	Q
Depth	D
Width	W
Velocity	V

Uppercase at Oxford. Lowercase at winter limit point.

Subscript s for summer, w for winter, m for mean.

Hydraulic radius of the river (Cross section area / wetted perimeter.)	r

Chapter 2.4

Width	w
Depth	d
Area of cross section of a channel	A
Slope of the channel	S
Velocity	v
Discharge	Q
Length of section	l
Height difference	h
Wetted perimeter of the channel	p
Hydraulic radius (Cross section area / wetted perimeter)	r
Manning resistance factor	n

Acknowledgements

In principio creavit Deus cælum et terram.
(Genesis 1.1)

Then the angel showed me the river of the water of life, clear as crystal.
(Revelation 22.1)

First, I thank and praise the Lord God for the creation of the earth and all that is in it and especially the rivers and that they are 'very good'. I hope that through this work more people may be enabled to enjoy what he has created.

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I am also grateful to Kevin East and Chris Hawkesworth of Canoe England and Ashley Charlwood of Canoe Wales for their encouragement and the information which they

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I also thank the organisations which have given permission for the reproduction of copyright material in the printed copies of this thesis.

Last but not least I thank my wife, Kay, for her support, for accepting very many books into our house and for removing some, if not all, the grammatical and spelling mistakes in this work.