

NAS Monograph Series No. 4

Series editor Gerald Grainge



Nautical
Archaeology
Society

The Gresham Ship Project

A 16th-Century Merchantman Wrecked in the
Princes Channel, Thames Estuary

Volume I: Excavation and Hull Studies

Edited by

Jens Auer and Thijs J. Maarleveld

with contributions by

Massimiliano Ditta, Antony Firth, Nigel Nayling, Delia Ní
Chíobháin, Christian Thomsen, and Cate Wagstaffe



BAR British Series 602

2014

NAS Monograph Series No. 4

Series editor Gerald Grainge



The Gresham Ship Project

A 16th-Century Merchantman Wrecked in the
Princes Channel, Thames Estuary

Volume I: Excavation and Hull Studies

Edited by

Jens Auer and Thijs J. Maarleveld

with contributions by

Massimiliano Ditta, Antony Firth, Nigel Nayling, Delia Ní
Chíobháin, Christian Thomsen, and Cate Wagstaffe

BAR British Series 602

2014



Published by

Archaeopress
Publishers of British Archaeological Reports
Gordon House
276 Banbury Road
Oxford OX2 7ED
England
bar@archaeopress.com
www.archaeopress.com

BAR 602

*The Gresham Ship Project, A 16th-Century Merchantman Wrecked in the Princes Channel, Thames Estuary
Volume 1: Excavation and Hull Studies*

© Archaeopress and the individual authors 2014

ISBN 978 1 4073 1210 1

Printed in England by Information Press, Oxford

All BAR titles are available from:

Hadrian Books Ltd
122 Banbury Road
Oxford
OX2 7BP
England
www.hadrianbooks.co.uk

The current BAR catalogue with details of all titles in print, prices and means of payment is available free from Hadrian Books or may be downloaded from www.archaeopress.com

Table of Contents

Foreword		iii
Acknowledgements		iv
1	Introduction	1
	1.1 Aims and Objectives	1
	1.2 Site Location	1
	1.3 Project Background	2
	1.4 The road to excavation	3
2	Excavation and Recording	7
	2.1 Logistics	7
	2.2 Methodology	8
	2.3 With the Benefit of Hindsight: a critical discussion of the 3D recording methodology	16
3	The Ship	19
	3.1 The Princes Channel Wreck: An Overview	19
	3.2 Site History: The Princes Channel Wreck in situ	20
	3.3 Construction	22
	3.4 Some Thoughts on the Sequence of Construction	39
	3.5 Oak Dendrochronology	43
	3.6 The Ship's Anchor	46
4	Armament	47
	4.1 Structural Evidence	47
	4.2 PC1, A Cast-Iron Falcon	48
	4.3 PC2, A Cast-Iron Minion	49
	4.4 PC3, A Cast-Iron Falcon	51
	4.5 PC4, A Wrought-Iron Perrier	53
	4.6 Carriages for Cast-Iron Ordnance	53
	4.7. Mountings for Wrought-Iron Ordnance	54
	4.8 Shot	54
	4.9 Discussion of the Armament Assemblage	55
5	From Record to Model	56
	5.1 The Record	56
	5.2 The Methods	56
	5.3 Preparing the Data	57
	5.4 Wood and Cardboard	58
	5.5 Selective Laser Sintering (SLS)	59
	5.6 Modelling Problem Areas	61
	5.7 Alignment of the Hull Sections	61
	5.8 The Model	65
6	Analysing the Model of the Princes Channel Ship	66
	6.1 The Master Frame	66
	6.2 The Bow	66
	6.3 The Stern	67
	6.4 Recording the Model	68
	6.5 A Lines Plan, Adjustments and Shape	68
	6.6 The Design of the Master Frame	69
	6.7 Tonnage	71
	6.8 More proportions and ratios	73
7	Furring in the Light of 16th Century Ship Design	75
	7.1 Mainwaring on Furring	75
	7.2 Thomas Harriot	75
	7.3 Matthew Baker and Phineas Pett	76

TABLE OF CONTENTS

7	Furring in the Light of 16th Century Ship Design (cont.)	
7.4	John Smith and Nathaniel Butler	77
7.5	Later References	78
7.6	Other References	79
7.7	Early Modern Ship Design in England	79
8	The Ship from the Princes Channel: A typical 16 th Century Merchant Vessel?	81
8.1	From Princes Channel Wreck to Gresham Ship: A Summary	81
8.2	The Gresham Ship in the Context of Early Modern Ship-building	82
9	In Conclusion: Looking Back and Looking Forward	86
9.1	Results	86
9.2	The Archaeological Process	87
9.3	The Role of Universities	89
9.4	Final Remarks	90
	Appendix: Princes Channel Wreck – Dendrochronological Data	91
	Glossary	93
	Bibliography	103
	Index	108