## **Contents**

9 Preface

## Part I

Along the Road. Aspects of Causewayed Enclosures in South Scandinavia and Beyond

By Lutz Klassen

- 13 1 Introduction
- 17 2 The area of investigation
- 23 3 Causewayed enclosures and related sites in Djursland
- 4 Causewayed enclosures and related sites in the TRB North Group distribution area
- 5 Predicting the location of causewayed enclosures in South Scandinavia: Previous approaches
- 35 5.1 T. Madsen's work (1979-1988)
- 37 5.2 Klatt's study (2009)
- 38 5.2.1 The different criteria and calculations used by Klatt
- 42 5.2.2. Grid combination and calculation
- 44 5.2.3 Conclusion
- 6 Predicting the location of causewayed enclosures in South Scandinavia: A new approach
- 45 6.1 Classification of known enclosures
- 48 6.2 Evaluation of the parameters hitherto employed in predictive modelling
- 48 6.2.1 Relation to water
- 49 6.2.2 Distance to megalithic graves

50	6.2.3 Soil type
51	6.2.4 Neolithic finds
52	6.2.5 Topography
52	6.2.5.1 Promontory type enclosures
54	6.2.5.2 Hilltop type enclosures
55	6.2.5.3 Conclusion
55	6.3 New parameters for predictive modelling
55	6.3.1. Inter-enclosure spacing
56	6.3.2 Enclosures in relation to communication infrastructure
58	6.3.2.1 Danish enclosures and reconstructed prehistoric roads/paths
77	6.3.2.2 Danish Neolithic enclosures and historic roads
80	6.3.3 River crossings
81	6.3.4 Enclosures and Viking Age/Medieval military installations
85	7 Predicting enclosures in Djursland
85	7.1 Preparing required datasets
85	7.1.1 Reconstructing the coastline at 3500 BC
88	7.1.2 Defining freshwater paths and river confluences
89	7.1.3 Defining river mouths
89	7.1.4 Reconstructing Neolithic roads/paths and river crossings
91	7.1.5 Point datasets for Viking Age/Medieval fortifications and Neolithic finds
91	7.1.6 Soil type map
92	7.1.7 Historic roads
92	7.2 Pointing out potential enclosure locations
94	7.3 Testing potential enclosure locations
95	7.3.1 Aerial survey
100	7.3.2 Field survey
102	7.3.2.1 Results of the survey
103	7.3.2.2 The finds
108	7.3.2.3 Discussion
109	7.3.3 Geophysical survey
109	7.3.3.1 Selection of locations
114	7.3.3.2 Results
121	8 The predictive model: evaluation of predictive parameters, test methods and results
121	8.1 The predictive parameters
124	8.2 The test methods
124	8.2.1 Aerial photographs
124	8.2.2 Field surveying
124	8.2.3 Geophysical survey
125	8.3 Archaeological results
125	8.3.1 Specific research questions
127	8.3.2 Causewayed enclosures and related sites in Djursland: State of research after predictive modelling

131	9 Aspects of causewayed enclosures in South Scandinavia in light of the results of this study
131	9.1 Causewayed enclosures and their relation to the contemporary coastline
133	9.2 Causewayed enclosures and inter-enclosure distances
134	9.3 Causewayed enclosures and TRB settlement in Djursland
135	9.3.1 Late Mesolithic
136	9.3.2 Early Neolithic (EN I)
141	9.3.3 Late Early and early Middle Neolithic (EN II – MN A I)
143	9.3.4 Summary and conclusions
151	9.3.5 The east Jutland model: A critical review
151	9.3.5.1 Summary of the east Jutland model
152	9.3.5.2 Chronological aspects
152	9.3.5.3 Economic aspects
153	9.3.5.4 Pottery styles
154	9.3.5.5 Settlement
154	9.3.5.6 Enclosures and territories
158	9.3.5.7 Conclusion
159	10 Scandinavian enclosures from a European perspective
159	10.1 Parallels between Scandinavian and other European enclosures: An overview
162	10.2 Aspects of enclosure architecture
163	10.2.1 Enclosures with three or more (partial) ditch circuits
168	10.2.2 Enclosures with clavicle-type ditch segments and rectangular palisade annexes
170	10.2.3 Enclosures with wide ditch circuit spacing
174	10.2.4 Enclosures with differing circuit widths
175	10.2.5 Enclosures with egg-shaped site plans
179	10.2.6 Enclosures with double post entrance structures
182	10.2.7 Enclosures with post framed banks and ditches on both sides of the bank: The Vilsund site
192	10.2.8 Additional observations
197	10.2.9 Discussion
199	10.3 Aspects of enclosure chronology
199	10.3.1 Scandinavian enclosure chronology
202	10.3.1.1 <sup>14</sup> C-dated enclosures
204	10.3.1.2 Archaeologically dated enclosures
205	10.3.1.3 Enclosure-related sites
205	10.3.1.4 Summary and discussion
206	10.3.2. European enclosure chronology
208	10.3.2.1 Enclosures from 4400 to 4000 BC
209	10.3.2.2 Enclosures from 4000-3750 BC
211	10.3.2.3 Enclosures from 3750-3500 BC
213	10.3.2.4 Enclosures from 3500-3200 BC
214	10.4 Enclosure construction 3750-3500 BC and European corridors of (ritual) communication
219	10.4.1 Southern central Europe and South Scandinavia
221	10.4.1.1 Transverse pits on causeways

223	10.4.1.2 Entrance screens
225	10.4.1.3 Other entrance structures
225	10.4.1.4 Fenced rectangular annexes
226	10.4.1.5 Further links
232	10.4.1.6 Summary and conclusion
232	10.4.2 Southern central Europe and northern central Germany
233	10.4.3 Southern central Europe and southern England
235	10.4.4 Southern central Europe and central western France
238	10.4.5 Other long-distance routes
239	11 Conclusion: Long-distance routes, enclosures and South Scandinavia
249	12 Summary
259	13 References
279	Appendix
285	Part II
	Geophysical survey of potential Neolithic enclosure sites in Djursland
	By Lutz Klassen & Christina Klein
287	1 Introduction
291	2 Results of the geophysical survey
327	3 Evaluation
329	4 References