

100 Saltburn to Bridlington

33. TITLE **Winter seabird survey: Block 41/30, Flamborough Head and Bridlington Bay.**
YEAR 1993
ORGANISATION Hull University. Institute of Estuarine and Coastal Studies, & Kelt UK Ltd
ABSTRACT Investigates species composition and distribution of seabirds during the winter of 1992/1993. The survey aims to: establish which species utilise the area during the winter; establish the levels of usage, particularly those species of conservation importance; locate areas of preference and zones of sensitivity within and outside the area; establish the main periods of usage during the winter. A series of surveys were initiated including: desk study and data search; shore-based survey; boat-based survey; aerial survey. Analyses of data from these surveys provides an indication of the winter importance of the area both for seabirds as a whole and individual species. The data shows two areas of significant communities, Flamborough Head and the coastal strip from Bridlington to Ulrome. Filey Bay and the inshore waters of the coastline immediately south of Ulrome were also noted as areas of preferred location. The period of lowest ornithological activity was from December to February, although fluctuations for certain groups were observed. (Humberside, Saltburn to Bridlington Natural Area)
LOCATION P
NOTES iii, 39p. Bibliog. Hull.

101 Bridlington to Skegness Natural Area

34. TITLE **Spurn Heritage Coast Project: Summer Ranges report 1992.**
YEAR 1992
AUTHOR GRIFFITHS, S.
ABSTRACT Details the work undertaken, covers practical projects and analyses reaction to the events programme prepared for the public. (Bridlington to Skegness Natural Area, Humberside, Outdoor recreation, Tourism, Yorkshire)
LOCATION P
NOTES 1v. (var. pag.). No place of publication given.
35. TITLE **Saltfleetby - Theddlethorpe Dunes National Nature Reserve Lincolnshire: vegetation survey.**
YEAR 1989
AUTHOR SOUTHEY, J., & SMITH, T.
ORGANISATION National Rivers Authority (NRA). Anglian Region, & Ecosurveys Ltd.
ABSTRACT Describes the vegetation of these intertidal sand and mud flats, sand dunes and saltmarsh and describes each of the National Vegetation Classification (NVC) types found. Provides target notes and contains vegetation maps and quadrat data tables. (Bridlington to Skegness Natural Area, NNR)

- LOCATION P
NOTES iv. (var. pag.) Ruskington.
36. TITLE **A coastal strategy for Spurn.**
YEAR 1992
ORGANISATION Spurn Heritage Project
ABSTRACT Aims to provide a policy for the future management of Spurn as a coastal feature. (Bridlington to Skegness Natural Area, Coastal management, Humberside)
- LOCATION P
NOTES 8p. No place of publication given.
37. TITLE **The photogrammetric modelling and spatial analysis of shoreline retreat between Dimlington and Kilnsea, Holderness.**
YEAR 1995
AUTHOR ADAMS, B.J.
ORGANISATION University College London. Department of Geography
ABSTRACT The application of photogrammetric modelling, coupled with moving average, power spectra and semi-variance techniques of spatial analysis, has led to the identification of high frequency, periodic and accelerated spatial patterns in shoreline retreat between Dimlington and Kilnsea. A systems approach was used to evaluate the interaction between the geophysical parameters of the marine erosion environment. The soft glacial tills of the Holderness cliffline experienced rapid retreat over the nine year study period. Their geotechnical and mechanical weakness is a causal factor, presenting minimal resistance against assailing forces of the wave subsystem. Maximum retreat of 85m occurred in the sand dune system and was counterbalanced through localised transport pathways, by progradation of 20m. Photogrammetric modelling offers a new spatial dimension of retreat rate measurements, which are suitable for integration into interactive and predictive models of shoreline change. (Bridlington to Skegness Natural Area, Coastal geomorphology, Humberside, Survey and monitoring)
- LOCATION P
NOTES 49p. Bibliog. London. Date of publication guessed.
38. TITLE **Holderness: coastal and estuarial issues.**
YEAR 1993
ORGANISATION Holderness Borough Council
ABSTRACT Briefly describes existing coastal defence policies and explores issues concerned with the production of a Shoreline Management Plan. Presents case studies using a range of sites at risk from coastal erosion. (Bridlington to Skegness Natural Area, Coast protection, Coastal management, Humberside, Sea defences)
- LOCATION P
NOTES 1v.(var. pag.). No place of publication given.

39. TITLE **Holderness coastal defence.**
YEAR 1994
ORGANISATION Hull University. Institute of Estuarine and Coastal Studies
ABSTRACT Outlines the results of work on the erosion of the Holderness cliffs and the environmental impact of defence works. The effects of specific coastal defences were monitored and a predictive model of cliff recession provided. (Bridlington to Skegness Natural Area, Coast protection, Humberside, Sea defences, Survey and monitoring)
LOCATION P
NOTES 29p. + appendices. Bibliog. Hull.
40. TITLE **A rejoinder to the scheme of historical development of Spurn put forward in the Spurn Heritage Coast Study: final report (Institute of Estuarine and Coastal Studies, University of Hull), January 1992.**
YEAR 1992
AUTHOR DE BOER, G.
ABSTRACT The author defends his hypothesis that the history of Spurn before 1850 followed a pattern of development that in broad terms, repeated itself over a time span of about 250 years. (Bridlington to Skegness Natural Area, Coastal geomorphology, Humberside)
LOCATION P
NOTES 17p. + appendices. No place of publication given. Date of publication guessed.
41. TITLE **Minestone as a coastline protection medium: a feasibility study in relation to the coast of Holderness.**
ORGANISATION Sea Sediments, & National Coal Board. North East Area
YEAR 1986
ABSTRACT Attempts to present all available information to enable the National Coal Board (NCB), Holderness Joint Advisory Committee and the aggregate dredging industry to reach joint conclusions concerning the viability of nearshore minestone deposition as a method of shoreline stabilisation. Also aims to determine the format of succeeding phases of enquiry, should the outcome of the feasibility study prove favourable. Considers minestone as a shore protection medium, shipment, shoreline protection schemes and the environmental impact of minestone deposition. Appendix provides an overview of erosion processes along the Holderness shore. (Bridlington to Skegness Natural Area, Coal mining, Coast protection, Humberside, Waste disposal)
LOCATION P
NOTES 50p. Bibliog. Chard.

102 The Wash

42. TITLE **Further ecological studies on the Wash: final report.**
YEAR 1978
AUTHOR GRAY, A.J.
ORGANISATION Institute of Terrestrial Ecology (ITE)
ABSTRACT Covers the following: colonisation of borrow pits by invertebrates; sediment accretion rates associated with reclamation; grass species trials on the engineering trial banks. (Saltmarshes, The Wash Natural Area)
LOCATION P
NOTES 94p. Bibliog. Wareham.

104 Sheringham to Lowestoft

43. TITLE **Report on the results of a survey of the distribution of the polychaete Sabellaria spinulosa in Block 401, Great Yarmouth.**
YEAR 1995
ORGANISATION Unicomarine Ltd.
ABSTRACT Results suggest that the tube-building polychaete worm Sabellaria spinulosa is not present in large quantities in production licence area 401/2, in contrast to the results of a survey undertaken in 1993 which showed Sabellaria reefs in greater quantities. (Norfolk, Sheringham to Lowestoft Natural Area)
LOCATION P
NOTES 1v. (var. pag.). No place of publication given.
44. TITLE **Caister Beach coast protection: engineer's report; Issue 3, Revision 0.**
YEAR 1997
ORGANISATION Sir William Halcrow & Partners Ltd., & Great Yarmouth Borough Council
ABSTRACT Continued beach erosion at Caister-on-Sea, Norfolk has resulted in the asphaltic sea wall protecting the town becoming increasingly vulnerable to undermining. This report describes the investigations undertaken and presents the preferred option for coast protection. The objectives are as follows: to present the background to the problem and the current baseline situation; to define the problem of coastal erosion at Caister-on-Sea in the context of the overall Management Unit, as defined in the Lowestoft to Sheringham Shoreline Management Plan; to consider the feasibility of alternative solutions; to undertake a technical, economic and environmental assessment of the options in accordance with MAFF's Project Appraisal Guidance Notes; to develop a suitable plan for the future management of the beach; to present the conclusions, and advise on the optimum solution and recommended way forward. (Coastal engineering, Sea defences, Sheringham to Lowestoft Natural Area)
LOCATION P
NOTES 1v. (var. pag.). Bibliog. Swindon. Document No. WD/CBCP/RI.

105 Suffolk Coast

45. **TITLE** **Harwich Harbour strategic studies: mud transport processes in the intertidal areas of the Stour.**
- YEAR** 1996
- AUTHOR** DEARNALEY, M.P., and others
- ORGANISATION** HR Wallingford, & Harwich Haven Authority (HHA)
- ABSTRACT** It has been observed that the intertidal areas of the Stour and Orwell estuaries have been eroding in recent years, resulting in a reduction in mudflat elevations and recession of salt marshes. As part of their ongoing programme of strategic research, Harwich Haven Authority commissioned a study to improve the understanding of the hydrodynamic and sediment transport processes occurring on the intertidal areas, concentrating on the Stour estuary. The results of this work should contribute to predictions of future changes in the intertidal flats and assist consideration of possible mitigation measures to reduce or reverse present trends for erosion. (Coastal geomorphology, Essex, Suffolk Coast Maritime Natural Area)
- LOCATION** P
- NOTES** 1v. (var. pag.). Wallingford. Report EX 3531
46. **TITLE** **The estuaries of the Orwell and Stour: monitoring and management recommendations.**
- YEAR** 1993
- ORGANISATION** Hull University. Institute of Estuarine and Coastal Studies
- ABSTRACT** Outlines the requirement for research and monitoring necessary for the provision of a data base which is adequate for the future management of the estuaries and provides a preliminary management strategy. (Essex, Suffolk, Suffolk Coast Maritime Natural Area)
- LOCATION** P
- NOTES** 8p. Hull
47. **TITLE** **Harwich Harbour strategic studies: detailed numerical modelling of the Stour Estuary.**
- YEAR** 1996
- AUTHOR** BAUGH, J.
- ORGANISATION** HR Wallingford, & Harwich Haven Authority (HHA)
- ABSTRACT** HR Wallingford was asked to establish a fine resolution numerical flow model of the Stour Estuary. This model was to be based on the well established model of the Stour-Orwell system and was intended to more accurately model the tidal currents over the inter-tidal banks and in the low water channels of the Stour Estuary and so provide data to improve the simulation of the sediment transport in those areas. HR used the finite element flow model TELEMAC2D, developed by EDF-LNH. TELEMAC2D employs an entirely unstructured model grid which enabled very fine resolution of the bathymetry and the tidal currents in the areas of interest. The model was used to simulate repeating mean spring, mean and mean neap tides. Also to enable longer term modelling of the sediment transport a separate

TELEMAC2D model was established with reduced resolution so that the tidal flows throughout a spring-neap cycle could be simulated. (Coastal geomorphology, Essex, Estuaries, Suffolk Coast Maritime Natural Area)

- LOCATION P
NOTES Iv. (var. pag.). Bibliog. Wallingford. Report EX3395
48. TITLE **Harwich Harbour strategic studies: mud transport modelling of the 1995 configuration of Harwich Harbour and the Stour and Orwell Estuaries.**
- YEAR 1996
- AUTHOR DEARNALEY, M.P., ROBERTS, W., & SPEARMAN, J.R.
- ORGANISATION HR Wallingford & Harwich Haven Authority (HHA)
- ABSTRACT Harwich Haven Authority commissioned HR Wallingford to carry out mud transport modelling of the 1995 configuration of Harwich Harbour and the Stour and Orwell Estuaries. This was carried out using the same methodology as had been used for a previous study of the 1986 configuration of the Harbour and Estuaries. Changes to the geometry and hydrodynamic regime of the system between 1986 and 1995 were considered together with differences in the model predictions of the sediment transport patterns in the two years. The main imposed change to the system was the deepening of the harbour area and the approach channel, leading to decreased current speeds in the harbour area. This appears to be associated with an increased tendency for erosion of the Stour and Orwell Estuaries, with little net change to the accretion rate in the harbour itself. (Coastal geomorphology, Essex, Suffolk Coast Maritime Natural Area)
- LOCATION P
PERMLOAN Permanent Loan: Maritime Team (T. Collins)
NOTES Iv. (var. pag.). Wallingford. Report EX 3354
49. TITLE **Development of Harwich deep water channel: impact of berms on wave conditions and sediment movement.**
- YEAR 1993
- ORGANISATION HR Wallingford, & Harwich Haven Authority (HHA)
- ABSTRACT Assesses the impact on wave conditions and coastal sediment transport of using material dredged from the channel to form berms or mounds adjacent to the coastline. Three berm sites were considered, offshore of the coast between Languard Point and Cobbolds Point, near Foulton Hall, and two berms near The Naze. A further large mound adjacent to the Naze and Hamford Water was also considered. For each of these sites the mobility of the dredged material under the influence of waves and tidal currents was predicted using wave data from the earlier study, and currents measured using the OSCR system. The effect of the berms on local wave conditions was predicted using a computational model representing wave refraction, shoaling, diffraction, friction and breaking. The effect of the berms on coastal sediment transport was examined using a computational model of littoral drift. As it became evident that much of the dredged material was mobile under frequently occurring conditions, further calculations of dispersion were also

- undertaken. (Coastal engineering, Coastal geomorphology, Dredging, Essex, Estuaries, Suffolk Coast Maritime Coastal Natural Area)
- LOCATION P
NOTES Iv. (var. pag.). Wallingford. Report EX 2694
50. TITLE **Harwich Harbour strategic studies: mud transport modelling.**
YEAR 1996
ORGANISATION HR Wallingford, & Harwich Haven Authority (HHA)
ABSTRACT Using a mud transport model based on the TELEMAC modelling system, simulations were carried out based on a sequence of tides of varying range and typical wave conditions. Further sensitivity tests investigated the effect of the highest astronomical tide and the effect of high offshore suspended sediment concentrations. The model prediction of areas of erosion and accretion was in good agreement with observed behaviour. A need was identified for monitoring of suspended sediment concentrations in the nearshore coastal waters. (Coastal geomorphology, Essex, Estuaries, Suffolk Coast Maritime Natural Area)
- LOCATION P
NOTES Iv. (var. pag.). Wallingford. Report EX 3331.
51. TITLE **Harwich Harbour: effects on intertidal areas of a proposed increase in the dredged depth of the approach channel to Trinity Terminal.**
ORGANISATION HR Wallingford, & Harwich Haven Authority
YEAR 1992
ABSTRACT Computer model results of tidal flows and analyses of historical bed changes were used to predict changes in tidal flows, sediment transport and sediment deposition in the Stour and Orwell Estuaries which would result from the proposed increase in the dredged depth of the approach channel to Trinity Terminal. The intention was to assess whether sediment deposition rates in the intertidal areas were likely to increase or decrease as a result of the proposed changes in dredged depth downstream, and to indicate if any changes occurring would be significant in engineering terms. Analyses of historical bed changes in Harwich Harbour were used to assess changes in bathymetry which have occurred in the past in response to changes in dredging strategy. The bed level changes could be compared with general trends predicted by the computer models, in order to demonstrate the approximate consistency of the model results with observed changes, and in order to determine whether factors in addition to tidal processes affect sedimentation in the intertidal areas. (Coastal engineering, Coastal geomorphology, Essex, Estuaries, Suffolk Coast Maritime Natural Area)
- LOCATION P
NOTES Iv. (var. pag.). Wallingford. Report EX 2710

52. **TITLE** **Development of Harwich deep water channel: impact of berms on wave conditions and sediment movement.**
ORGANISATION HR Wallingford, & Harwich Haven Authority
YEAR 1993
ABSTRACT Assesses the impact on wave conditions and coastal sediment transport of using material dredged from the channel to form berms or mounds adjacent to the coastline. Three berm sites were considered, offshore of the coast between Languard Point and Cobbolds Point, near Foulton Hall, and two berms near The Naze. A further large mound adjacent to the Naze and Hamford water was also considered. For each of these sites the mobility of the dredged material under the influence of waves and tidal currents was predicted using wave data from the earlier study, and currents measured using the OSCAR system. The effect of the berms on local wave conditions was predicted using a computational model representing wave refraction, shoaling, diffraction, friction and breaking. The effect of the berms on coastal sediment transport was examined using a computational model of littoral drift. As it became evident that much of the dredged material was mobile under frequently occurring conditions, further calculations of dispersion were also undertaken. (Coastal engineering, Coastal geomorphology, Dredging, Essex, Estuaries, Suffolk Coast Maritime Natural Area)
- LOCATION** P
NOTES 1v. (var. pag.). Wallingford. Report EX 2694
53. **TITLE** **Harwich Harbour strategic studies: mud transport modelling.**
ORGANISATION HR Wallingford, & Harwich Haven Authority
YEAR 1996
ABSTRACT Using a mud transport model based on the TELEMAC modelling system, simulations were carried out based on a sequence of tides of varying range and typical wave conditions. Further sensitivity tests investigated the effect of the highest astronomical tide and the effect of high offshore suspended sediment concentrations. The model prediction of areas of erosion and accretion was in good agreement with observed behaviour. A need was identified for monitoring of suspended sediment concentrations in the nearshore coastal waters. (Coastal geomorphology, Essex, Estuaries, Suffolk Coast Maritime Natural Area)
- LOCATION** P
NOTES 1v. (var. pag.). Wallingford. Report EX 3331.
54. **TITLE** **Harwich Harbour strategic studies: mud transport processes in the intertidal areas of the Stour.**
YEAR 1996
AUTHOR DEARNALEY, M.P., and others
ORGANISATION HR Wallingford, & Harwich Haven Authority (HHA)
ABSTRACT It has been observed that the intertidal areas of the Stour and Orwell estuaries have been eroding in recent years, resulting in a reduction in mudflat elevations and recession of salt marshes. As part of their ongoing programme of strategic research, Harwich Haven Authority commissioned a study to improve the understanding of the

hydrodynamic and sediment transport processes occurring on the intertidal areas, concentrating on the Stour estuary. The results of this work should contribute to predictions of future changes in the intertidal flats and assist consideration of possible mitigation measures to reduce or reverse present trends for erosion. (Coastal geomorphology, Essex, Suffolk Coast Maritime Natural Area)

LOCATION
NOTES

P
1v. (var. pag.). Wallingford. Report EX 3531

55. **TITLE** **Harwich Harbour strategic studies: historical flow modelling.**
ORGANISATION HR Wallingford, & Harwich Haven Authority
YEAR 1995
ABSTRACT Contains a summary of TELEMAC flow model results from which comparisons of peak tidal currents and tidal elevations can be drawn. The modelling has demonstrated how, over the period 1900 to 1995, peak tidal currents have generally reduced over most of the Harbour Area, increased over Shotley Spit, the lower part of the Orwell and much of the Stour and decreased in the upper reaches of the Orwell Estuary. Changes in peak tidal elevation on mean spring tides have been small over the period 1900 to 1995, with a small increase in peak elevation in the Orwell and in the lower part of the Stour and a small decrease in the upper part of the Stour. During the period 1960 to 1995, when most of the Harbour dredging has taken place, the peak levels have reduced over much of the Stour, except for a small increase around Parkeston. (Coastal geomorphology, Essex, Estuaries, Suffolk Coast Maritime Natural Area)
- LOCATION
NOTES
- P
1v. (var. pag.). Wallingford. Report EX 3271

56. **TITLE** **Harwich Harbour: effects on intertidal areas of a proposed increase in the dredged depth of the approach channel to Trinity Terminal.**
YEAR 1992
ORGANISATION HR Wallingford, & Harwich Haven Authority (HHA)
ABSTRACT Computer model results of tidal flows and analyses of historical bed changes were used to predict changes in tidal flows, sediment transport and sediment deposition in the Stour and Orwell Estuaries which would result from the proposed increase in the dredged depth of the approach channel to Trinity Terminal. The intention was to assess whether sediment deposition rates in the intertidal areas were likely to increase or decrease as a result of the proposed changes in dredged depth downstream, and to indicate if any changes occurring would be significant in engineering terms. Analyses of historical bed changes in Harwich Harbour were used to assess changes in bathymetry which have occurred in the past in response to changes in dredging strategy. The bed level changes could be compared with general trends predicted by the computer models, in order to demonstrate the approximate consistency of the model results with observed changes, and in order to determine whether factors in addition to tidal processes affect sedimentation in the intertidal areas. (Coastal engineering, Coastal

- geomorphology, Essex, Estuaries, Suffolk Coast Maritime Natural Area)
- LOCATION P
NOTES Iv. (var. pag.). Wallingford. Report EX 2710
57. TITLE **Harwich Harbour strategic studies: potential dispersion of dredged material placed in the Stour Estuary.**
YEAR 1996
ORGANISATION Harwich Haven Authority & HR Wallingford
ABSTRACT Describes one of a series of studies commissioned by Harwich Haven Authority (HHA) as part of its programme of strategic hydraulic studies of Harwich Harbour and the Stour and Orwell Estuaries. This study has examined the likely dispersal of dredged material placed within the Stour Estuary. The retention of dredged material within the associated estuarine system as opposed to offshore disposal of the material is an issue currently under debate. Based on bathymetric surveys and dredging records the Stour Estuary is considered to have eroded at an average rate of about 75,000 cubic metres per year between 1986 and 1995. Losses from the Orwell Estuary are considered to be less, about 25,000 cubic metres per year. By placing some of the material regularly dredged from the Harbour area within the estuaries it is considered that it might be possible to reduce this rate of erosion. Within the Stour Estuary there are a number of over deep areas from the past winning of gravels. A possible option is to place maintenance dredged material into these overdeep areas. In this study the placement of about 10,000 cubic metres into the most upstream of the overdeep areas is examined. Objectives of the work were: to define the conditions under which resuspension of the placed material might occur; to define the areas where material resuspended from the placement site might accumulate; to investigate the sensitivity of the results to the impact of waves, and to possible differences in the physical properties of the placed material. (Dredging, Essex, Suffolk Coast Maritime Natural Area)
- LOCATION P
PERMLOAN Permanent Loan: Maritime Team (T. Collins)
NOTES Iv. (var. pag.). Bibliog. Wallingford. Report EX 3398
58. TITLE **Harwich Harbour strategic studies: historical flow modelling.**
YEAR 1995
ORGANISATION HR Wallingford, & Harwich Haven Authority (HHA)
ABSTRACT Contains a summary of TELEMAC flow model results from which comparisons of peak tidal currents and tidal elevations can be drawn. The modelling has demonstrated how, over the period 1900 to 1995, peak tidal currents have generally reduced over most of the Harbour Area, increased over Shotley Spit, the lower part of the Orwell and much of the Stour and decreased in the upper reaches of the Orwell Estuary. Changes in peak tidal elevation on mean spring tides have been small over the period 1900 to 1995, with a small increase in peak elevation in the Orwell and in the lower part of the Stour and a small decrease in the upper part of the Stour. During the period 1960 to

- 1995, when most of the Harbour dredging has taken place, the peak levels have reduced over much of the Stour, except for a small increase around Parkeston. (Coastal geomorphology, Essex, Estuaries, Suffolk Coast Maritime Natural Area)
- LOCATION P
NOTES 1v. (var. pag.). Wallingford. Report EX 3271
59. TITLE **Botanical survey of saltmarshes: Copperas Bay, Stour Estuary, Essex.**
YEAR 1987
AUTHOR HENDERSON, A.
ORGANISATION Royal Society for the Protection of Birds (RSPB)
ABSTRACT Presents the results of a study carried out in July-August 1986 which aimed to: survey and map the macrophyte vegetation on all the saltmarsh habitats; consider the effects of erosion and accretion on the saltmarsh flora and the impact of freshwater on the saltmarsh flora; produce a report with management guidelines for the Reserves Division. (Suffolk Coast Maritime Natural Area, Salt marshes)
- LOCATION P
NOTES 1v. (var. pag.). Bibliog. No place of publication given.
60. TITLE **Harwich channel deepening: wave climate monitoring studies for 1995.**
YEAR 1996
AUTHOR BRYANT, S.
ORGANISATION HR Wallingford
ABSTRACT Before 1994 vessels using the ports of Harwich and Felixstowe navigated within a deep water channel originally dredged in the 1970's. It was proposed that the depth of the channel be increased, and dredging was carried out during 1994. In March 1996 HR Wallingford was commissioned to hindcast wave climates and littoral drift rates using 1995 wind data and an updated bathymetry using recent survey data. In this study the impact of the channel deepening on wave conditions and littoral drift rates during this period was assessed. (Coastal geomorphology, Essex, Estuaries, Suffolk Coast Maritime Natural Area)
- LOCATION P
NOTES 1v. (var. pag.). Wallingford. Report EX3420
61. TITLE **Harwich Harbour strategic studies: hydrodynamic flow modelling.**
YEAR 1994
AUTHOR BAUGH, J.
ORGANISATION HR Wallingford, & Harwich Haven Authority (HHA)
ABSTRACT In 1993 Harwich Haven Authority (HHA) approached HR Wallingford with the view to setting up and calibrating a flow modelling tool, TELEMAC, which could be used for a variety of engineering applications through a series of staged studies. The aim was that the new flow modelling tool based upon the TELEMAC flow modelling system developed by LNH in France would supersede the existing HR TIDEFLOW model which covers parts of Harwich Harbour and the

Stour and Orwell Estuaries. This was to be achieved by the TELEMAC model encompassing both a larger area and having greater resolution at important locations within the Harbour and Estuaries. The present report covers: A general description of the TELEMAC model along with information on the input data sources for bathymetry and boundary conditions and details of the grid generation; the calibration and validation of the TELEMAC model; results of investigations into the impact of engineering works within Harwich Harbour on tidal flow patterns in the modelled area; results of investigations into the natural variation in tidal flow patterns due to different tidal ranges, freshwater flow, surge tides and changes in relative sea level rise; and a discussion of the results with respect to the impact of engineering works on tidal propagation in the estuaries. (Coastal geomorphology, Essex, Suffolk Coast Maritime Natural Area)

LOCATION
NOTES

P
1v. (var. pag.). Wallingford. Report EX3054

62. TITLE **Investigation into the breaching/removal of the flood embankment in the lee of Orford Ness.**

YEAR

1997

ORGANISATION

Environment Agency. Anglian Region, & ABP Research & Consultancy

ABSTRACT

Documents the findings of a study into the impacts due to a breach in the embankment, within the lee of Orford Ness, Suffolk. The approach was to utilise an existing 1D numerical model to establish the pre and post breach hydrodynamic and morphological climates within the Alde/Ore Estuary. Results indicated that water levels within the estuary would not be significantly altered as a result of the breach or as a result of the entire loss of the embankment. Further study indicated that the tidal energy dissipation per unit area of the estuary bed would not be altered greatly. Results indicated that energy dissipation would reduce slightly in the areas of the inner estuary above the breach. Such reductions are likely to marginally reduce stress levels on the sea defences within such areas. Seaward of the breached area energy dissipation at the channel bed increased. Such increased energy dissipation will marginally increase the stress on the sea defences in these areas. Further work discusses the impact of the increased water levels within the marshland in the lee of Orford Ness, once the embankment has been breached. It was concluded, that due to increased water levels, the likelihood of repeat damage to the shingle spit, of the nature that occurred in the storms of December 1990, would be reduced. Furthermore, whilst the increased water levels within the marshland area would result in increased probability of wave activity close to the leeward face of the shingle spit, the waves within the estuary tend to be locally generated and of relatively low energy, so that this activity is unlikely to threaten the integrity of the shingle bank. (Coast protection, Coastal engineering, Suffolk Coast Maritime Natural Area)

LOCATION
NOTES

P
1v. (var. pag.). Southampton. Research Report No. R. 575

63. TITLE **National Vegetation Classification of the saltmarsh of the Deben, Alde- Ore and Blyth estuaries, Suffolk.**
YEAR 1993
ORGANISATION English Nature (EN) & Suffolk Wildlife Trust
ABSTRACT Aims to complete a full NVC survey of intertidal estuarine habitats and to accurately map the distribution of saltmarsh NVC communities and sub-communities. Also aims to provide a baseline for studying future changes in these communities. (Suffolk Coast Maritime Natural Area)
LOCATION P
NOTES 36p.
LOCATION P
NOTES 1v. (var. pag.). Bibliog. Wallingford. Report No. EX1176.
64. TITLE **Sand and gravel mobility in relation to offshore dredging: a radioactive tracer study in the Shipway Channel off the Suffolk coast.**
YEAR 1984
ORGANISATION Department of the Environment (DOE). Mineral Planning Division & Hydraulics Research
ABSTRACT Describes an investigation into the mobility of sand and gravel in the Shipway Channel off the Suffolk coast. The investigation was based on experiments involving the placing and tracking of radioactive tracers, with the objective of assessing the movement of the natural sea bed material under the action of waves and currents in water depths less than 18 metres. (Sand and gravel extraction, Suffolk Coast Maritime Natural Area)
LOCATION P
NOTES 1 v. (var. pag.). Bibliog. Wallingford. Report No. EX1176
65. TITLE **Stour-Orwell estuary: coastal processes and conservation.**
YEAR 1993
ORGANISATION Hull University. Institute of Estuarine and Coastal studies
ABSTRACT Aims to: review the current knowledge of physical processes; review the coastal landforms within the estuary and summarise their Holocene development; assess the effects of changes in sea level, tidal range, wave climate and storm surge frequency; make recommendations regarding future research and monitoring requirements (Suffolk Coast Maritime Natural Area)
LOCATION P
NOTES 55p. + appendices. Bibliog. Hull.

106 North Kent Coast

66. TITLE **What should happen to the North Kent coastal defences?**
YEAR 1994
AUTHOR MASON, S.J.K.
ABSTRACT Proposes large scale managed retreat (MR) as a radical alternative to present coastal defence methods, which the author considers to be contradictory to sound environmental management and under severe

pressure from rising sea levels. States that MR can offer a means of integrating the concerns of diverse interest groups and provide an overview of strategies capable of providing a collective solution to problems. Maintains that while a general set back of defences would cause the loss of important habitats in the short term, with planning these could be recreated, sometimes elsewhere, and significant environmental enhancements achieved. There might still be a requirement for traditional defences, but further investigation could be made into reducing the at risk population in threatened areas. (Coastal engineering, Coast protection, North Kent Coast Natural Area, Sea defences)

LOCATION P
 NOTES 21p. + appendices. Bibliog. London. Place of publication guessed.

67. TITLE **Slip sliding away: coastal engineering; the management of an eroding coast; a study of the north Kent coast from Herne Bay to the Wantsum.**

YEAR 1997
 AUTHOR THOMAS, H
 ORGANISATION Canterbury City Council, Environment Agency (EA), & Kent Wildlife Trust

ABSTRACT A secondary school text on management of coastal erosion. (Coastal geomorphology, Coastal management, North Kent Coast Natural Area)

LOCATION P
 NOTES 43p. Canterbury.

108 Folkestone to Selsey Bill

68. TITLE **Dungeness: an ecological bibliography.**

ORGANISATION Nature Conservancy Council (NCC)
 YEAR 1988
 ABSTRACT Folkestone to Selsey Bill Natural Area, Kent, Sussex
 LOCATION P
 NOTES 41p. No place of publication given.

69. TITLE **Preliminary report on Long Pits & Dungeness bird observatory area, Dungeness.**

YEAR 1988
 AUTHOR FERRY, B.W., & LODGE, E.
 ORGANISATION Nature Conservancy Council (NCC) and Royal Holloway and Bedford New College

ABSTRACT Classifies the shingle-based vegetation according to the National Vegetation Classification (NVC) in response to the possible siting of the Dungeness 'C' power station within the area - a species rich community. (Coastal ecology, Folkestone to Selsey Bill Natural Area, Kent, Shingle beach, Vegetation classification)

LOCATION P
 NOTES 1v. (var. pag.). No place of publication given. NCC Contract No. MF3-03-356

70. **TITLE** **West Denge Beach, Dungeness: preliminary NVC report.**
YEAR 1988
AUTHOR FERRY, B., & LODGE, N.
ORGANISATION Nature Conservancy Council and Royal Holloway and Bedford New College
ABSTRACT Classifies the shingle-based vegetation according to the National Vegetation Classification (NVC) in response to Ministry of Defence (MOD) proposals to site four ranges within the area. (Coastal ecology, Folkestone to Selsey Bill Natural Area, Kent, Shingle beach, Vegetation classification)
LOCATION P
NOTES 1v. (var. pag.). No place of publication given. NCC Contract No. MF3-03-356.
71. **TITLE** **A preliminary survey of the intertidal benthic marine algal communities between Shakespeare Cliff and Abbot's Cliff, Dover, Kent.**
YEAR 1986
AUTHOR TITTLE, I.
ORGANISATION English Nature (EN) Science Directorate and the Nature Conservation Bureau Ltd
ABSTRACT Aims to evaluate planning and enable legislation in connection with coastal reclamation for the Channel Fixed Link. Brief accounts of intertidal benthic algal communities and species lists are presented. Fifty-eight species of benthic marine algae and one marine lichen are recorded. A range of communities colonising supralittoral, upper littoral and lower littoral levels was detected at Abbot's Cliff; midlittoral algal communities were largely absent due to wave-exposure. Midlittoral and lower littoral communities were particularly well developed at Shakespeare Cliff. Different communities were detected on the Gault central area foreshore. (Folkestone to Selsey Bill Natural Area)
LOCATION P
NOTES 8p. Bibliog. London.
72. **TITLE** **Eurotunnel environmental monitoring audit.**
YEAR 1991
ORGANISATION Atkins-Setec
ABSTRACT Contains a detailed review of the biological monitoring programmes associated with the Channel Tunnel's major construction sites at Shakespeare Cliff, Folkestone and Ashford. Includes freshwater, marine and terrestrial environments. (Folkestone to Selsey Bill Natural Area, Kent, Marine fauna, Marine flora)
LOCATION P
NOTES 81p. Bibliog. Sutton. Ref. Z1020/1991/Jan.

73. TITLE **Channel Tunnel Project. Marine Works at Shakespeare Cliff: "Skilled Eye" marine environmental surveys in the vicinity of the marine works, March 1990.**
- YEAR 1990
- ORGANISATION Institute of Offshore Engineering & Eurotunnel (UK)
- ABSTRACT Forms part of a marine environmental monitoring programme which monitors changes in the flora and fauna of the shore. (Folkestone to Selsey Bill Natural Area, Kent, Marine fauna, Marine flora)
- LOCATION P
- NOTES 21p. Bibliog. No place of publication given. IOE report No. IOEM/0010/B

109 Solent and Poole Bay

74. TITLE **Preliminary assessment of the shingle resource on the Sussex coast.**
- YEAR 1993
- AUTHOR RYLAND, K.
- ORGANISATION Dolphin Ecological Surveys
- ABSTRACT Aims to locate areas of vegetated shingle along the Sussex coast, between West Wittering and the East Sussex/Kent border, by interpretation of aerial photographs in preparation for a ground survey. (Coastal ecology, Solent and Poole Bay Natural Area, Shingle beach)
- LOCATION P,WL.
- NOTES 2v. (var. pag.). No place of publication given. One volume contains maps.
75. TITLE **Yachting traffic in Chichester Harbour.**
- YEAR 1993
- ORGANISATION Chichester Harbour Conservancy
- ABSTRACT Forms part of the three-yearly cycle of surveys first started in 1966. (Solent and Poole Bay Natural Area, Water recreation, West Sussex)
- LOCATION P
- NOTES 1v. (var. pag.). Chichester.
76. TITLE **West Sussex Seasearch, 1992-1993: Chichester Harbour to Littlehampton.**
- YEAR 1994
- AUTHOR IRVING, R.
- ORGANISATION Marine Conservation Society
- ABSTRACT The survey is designed to contribute to the Marine Nature Conservation Review (MNCR) undertaken by the JNCC. It aims to describe and define the extent of broad categories of sublittoral marine habitat and community types. Information was collected on the main sea bed types and the communities of plants and animals associated with them. Notes were also made on the human impacts at each site. The field survey method and techniques are described. (Solent and Poole Bay Natural Area, Marine conservation, Marine ecology)
- LOCATION P
- NOTES iii, 41p. Bibliog. Ross on Wye.

77. **TITLE** **Isle of Wight algal study: progress report.**
YEAR 1996
AUTHOR JONES, L.
ORGANISATION Portsmouth University & English Nature
ABSTRACT Aims to produce a modern marine benthic flora list for the Isle of Wight, so as to enable changes in species composition to be determined over time. This has involved updating the nomenclature of species collections over the last 130 years allowing the identification of any disappearances and introductions of species. The production of a species list allows comparisons to be made between the Isle of Wight vegetation and that of selected shores around Britain. Vegetation has been examined by means of destructive monthly sampling at sites around the island as well as by use of field experimental techniques utilising quadrats and line transects. As a result of these investigations number of species have been selected for more detailed study. Species so far include *Pelvetia canaliculata*, due to its unusual distribution pattern and *Zostera marina* because of the postulated decline in its abundance in the lagoons at Bembridge. A number of field and laboratory experiments have been carried out. The fucoid algae *Fucus vesiculosus* f. *linearis* has also been subject to an in depth study. This alga is thought to encompass *Fucus chalonii*, a Basque coast species thought to be a reduced form due to wave action. However many anomalies exist between the morphology and autecology of both, suggesting that they may infact represent different species. A population at Southsea has been selected for this joint study with workers at the University of Basque Country, Spain, Morphological examination, growth experiments and interfertility crosses have been undertaken. Results obtained from the morphological studies, as well as hybrid crossing suggest that *Fucus chalonii* may infact be a distinct species. (Hampshire, Solent and Poole Bay Natural Area)
- LOCATION** P
NOTES 30p. Bibliog. Portsmouth. Contract No. UG03/10
78. **TITLE** **Managed retreat: a discussion of its applicability in upper estuarine saltmarsh environments under rising sea level conditions.**
YEAR 1996
AUTHOR MANT, J.
ORGANISATION Portsmouth University
ABSTRACT Aims to discuss the economic and ecological implications of future coastal defence options in low lying estuarine areas in the light of predicted sea level rise and coastal dynamics, using Conigar Point, Emsworth, Hampshire as a case study. (Coast protection, Coastal management, Salt marshes, Sea defences, Solent and Poole Bay Natural Area)
- LOCATION** P
NOTES 82p. Bibliog. No place of publication given. BA project report.

79. **TITLE** **The littoral sedimentary fauna around Fawley.**
YEAR 1988
AUTHOR BAMBER, R.N., & STOCKWELL, T.
ORGANISATION Central Electricity Generating Board (CEGB)
ABSTRACT Identifies the marine communities present on the sedimentary shores of Stanswood Bay and Fawley salt marsh at Southampton Water, Hampshire. Assesses their ecological significance and the influence of the Fawley 'A' power station as part of a pre-application study for a possible Fawley 'B' coal fired power station. (Estuarine ecology, Solent and Poole Bay Natural Area)
- LOCATION** P
NOTES 13p. + appendices. Bibliog. Leatherhead. Research report TPRD/L/3291/R88
80. **TITLE** **River Itchen estuary: environmental background to the River Itchen mudlands.**
YEAR 1993
AUTHOR HILL, C.T., EDWARDS, P.J., & BALL, J.H.
ORGANISATION Southampton University. GeoData Institute, & Southampton City Council
ABSTRACT Provides a general survey of the nature conservation interest of the estuary of the River Itchen based on existing information and literature. On the basis of this review a strategy is suggested in order to develop an environmental database for future conservation planning and management (Estuaries, Hampshire, LNR, Solent and Poole Bay Natural Area, SSSI)
- LOCATION** P
NOTES 35p. Bibliog. Southampton.
81. **TITLE** **Solent environmental studies: marine ecology of the Solent.**
YEAR 1986
ORGANISATION Southampton University. Geodata Unit & Shell UK
ABSTRACT Reviews the available published and unpublished literature relating to the ecology of the Shell exploration area (PL266) in the Solent and Southampton Water and presents a summary of principal findings. Also appraises saltmarsh, littoral, sub-littoral and pelagic communities. (Hampshire, Solent and Poole Bay Natural Area)
- LOCATION** P
NOTES 14p. Bibliog. Southampton. Environmental report 3A/86.
82. **TITLE** **Working papers in coastal zone management No. 3: conserving the threatened coastal resource against all odds.**
YEAR 1993
AUTHOR PICKERING, H.
ORGANISATION Portsmouth University Centre for Coastal Zone Management
ABSTRACT Presents a critical review of the national and local initiatives active within Poole Harbour for the mitigation of development pressures on the natural environment. Particular attention is drawn to the problems caused by a diversity of statutory bodies, property rights and ineffective statutory provisions and to the regulatory and physical measures

available to the coastal manager for impact mitigation. The paper draws on the Centre for Coastal Zone Management's involvement in the management of the Harbour. (Coast protection, Coastal management, Protection of the environment, Solent and Poole Bay Natural Area)

LOCATION
NOTES

P
1v. (var. pag.). Bibliog. Portsmouth.

83. TITLE **Effects of tidal flooding: East Hayling Island, Hampshire. Draft report.**

YEAR 1996

AUTHOR BRAMPTON, A.

ORGANISATION Environment Agency, & HR Wallingford

ABSTRACT Describes the effects of possible breaches of sea defences at two sites on the eastern coast of Hayling Island in Hampshire. The resulting flooding of low-lying land, previously claimed from the sea, will increase the inter-tidal area of the harbour, and affect tidal currents within it. The likely locations and widths of the breaches, which might occur in the near future as a result of high tidal levels and storm waves, were estimated after a site inspection and analysis of survey data. A detailed computer model of tidal propagation within the harbour, established during an earlier study for the Chichester Harbour Conservancy, was adjusted to represent the situation after the breaches at the two sites. The changes in currents caused by each breach were calculated for a spring tide, and the resulting impacts on the existing morphology of the harbour were assessed. (Coast protection, Solent and Poole Bay Natural Area)

LOCATION
NOTES

P
1v. (var. pag.). Bibliog. Wallingford. Report no. EX3488

84. TITLE **Seabed sediment mobility study: interim report 2.**

YEAR 1997

AUTHOR BRAMPTON, A.H., & EVANS, C.D.R.

ORGANISATION Construction Industry Research and Information Association & HR Wallingford

ABSTRACT Part of a research project which aims to provide information on: the disposition and movement of seabed sediments over a large area west of the Isle of Wight; the potential effects, particularly on the coastline, of dredging sand and shingle from the seabed. Describes the numerical modelling carried out both to improve knowledge of the natural hydraulic and sedimentary processes, and to examine the possible impacts on of dredging in two hypothetical extraction areas within the study area. It also considers the interactions between sediment transport over the seabed and beach changes, and presents recommendations for further research and monitoring both within the study area, and in connection with dredging activities here and elsewhere around the UK coastline. (Coast protection, Coastal geomorphology, Hampshire, Solent and Poole Bay Natural Area)

LOCATION
NOTES

P
109p. Bibliog. London. Research Project No. 549