

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: RIS@JNCC.gov.uk

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 15 December 1993

3. Country:

UK (England)

4. Name of the Ramsar site:

Medway Estuary and Marshes

5. Designation of new Ramsar site or update of existing site:

This RIS is for: Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area:

** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

b) **Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

8. Geographical coordinates (latitude/longitude):

51 24 02 N 00 40 38 E

9. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Canterbury

On the north coast of Kent, within the Greater Thames estuary.

Administrative region: Kent

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 4696.74

Min.	-1
Max.	3
Mean	1

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

A complex of rain-fed, brackish, floodplain grazing marsh with ditches, and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. Rare wetland birds breed in important numbers. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.

13. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

2, 5, 6

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 2

The site supports a number of species of rare plants and animals. The site holds several nationally scarce plants, including sea barley *Hordeum marinum*, curved hard-grass *Parapholis incurva*, annual beard-grass *Polypogon monspeliensis*, Borrer's saltmarsh-grass *Puccinellia fasciculata*, slender hare's-ear *Bupleurum tenuissimum*, sea clover *Trifolium squamosum*, saltmarsh goose-foot *Chenopodium chenopodioides*, golden samphire *Inula crithmoides*, perennial glasswort *Sarcocornia perennis* and one-flowered glasswort *Salicornia pusilla*. A total of at least twelve British Red Data

Book species of wetland invertebrates have been recorded on the site. These include a ground beetle *Polistichus connexus*, a fly *Cephalops perspicuus*, a dancefly *Poecilobothrus ducalis*, a fly *Anagnota collini*, a weevil *Baris scolopacea*, a water beetle *Berosus spinosus*, a beetle *Malachius vulneratus*, a rove beetle *Philonthus punctus*, the ground lackey moth *Malacosoma castrensis*, a horsefly *Atylotus latistriatuus*, a fly *Campsicnemus magius*, a soldier beetle, *Cantharis fusca*, and a crane fly *Limonia danica*. A significant number of non-wetland British Red Data Book species also occur.

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

47637 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6 – species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species with peak counts in spring/autumn:

Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa -wintering 3103 individuals, representing an average of 1.2% of the population (5 year peak mean 1998/9-2002/3)

Common redshank , *Tringa totanus totanus*, 3709 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Dark-bellied brent goose, *Branta bernicla bernicla*, 2575 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)

Common shelduck , *Tadorna tadorna*, NW Europe 2627 individuals, representing an average of 3.3% of the GB population (5 year peak mean 1998/9-2002/3)

Northern pintail , *Anas acuta*, NW Europe 1118 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3)

Ringed plover , *Charadrius hiaticula*, Europe/Northwest Africa 540 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3)

Red knot , *Calidris canutus islandica*, W & Southern Africa (wintering) 3021 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)

Dunlin , *Calidris alpina alpina*, W Siberia/W Europe 8263 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in spring/autumn:

Black-tailed godwit , *Limosa limosa islandica*, Iceland/W Europe 721 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.

Details of bird species occurring at levels of National importance are given in Section 22

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	alluvium, mud, shingle
Geomorphology and landscape	coastal, floodplain, intertidal sediments (including sandflat/mudflat), estuary
Nutrient status	eutrophic
pH	circumneutral
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	no information
Water permanence	usually permanent, usually seasonal / intermittent
Summary of main climatic features	Annual averages (Greenwich, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/greenwich.html) Max. daily temperature: 14.8° C Min. daily temperature: 7.2° C Days of air frost: 29.1 Rainfall: 583.6 mm Hrs. of sunshine: 1461.0

General description of the Physical Features:

The Medway Estuary feeds into and lies on the south side of the outer Thames estuary. It forms a single tidal system with the Swale and joins the Thames estuary between the Isle of Grain and Sheerness. It has a complex arrangement of tidal channels, which drain around large islands of saltmarsh and peninsulas of grazing marsh. The mudflats are rich in invertebrates and also support beds of *Enteromorpha* and some eelgrass *Zostera* spp. Small shell beaches occur, particularly in the outer part of the estuary. Grazing marshes are present inside the sea-walls around the estuary. The complex and diverse mixes of coastal habitats support important numbers of waterbirds throughout the year.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The Medway Estuary feeds into and lies on the south side of the outer Thames estuary. It forms a single tidal system with the Swale and joins the Thames estuary between the Isle of Grain and

Sheerness. It has a complex arrangement of tidal channels, which drain around large islands of saltmarsh and peninsulas of grazing marsh.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping, Flood water storage / desynchronisation of flood peaks, Maintenance of water quality (removal of nutrients)

19. Wetland types:

Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	58.3
H	Salt marshes	16.8
4	Seasonally flooded agricultural land	13.8
Other	Other	9.3
M	Rivers / streams / creeks: permanent	1.2
TP	Freshwater marshes / pools: permanent	0.4
J	Coastal brackish / saline lagoons	0.2
E	Sand / shingle shores (including dune systems)	0.02

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The intertidal flats are of fine, silty sediment. The saltmarsh shows a transition from pioneer communities containing *Zostera* to high saltmarsh dominated by *Atriplex portulacoides*. The grazing marsh grassland is mesotrophic and generally species-poor. It does, however, contain scattered rarities, mostly annuals characteristic of bare ground. Where the grassland is seasonally inundated and the marshes are brackish the plant communities are intermediate between those of mesotrophic grassland and those of saltmarsh. The grazing marsh ditches contain a range of flora of brackish and fresh water. The aquatic flora is a mosaic of successional stages resulting from periodic clearance of drainage channels. The dominant emergent plants are *Phragmites australis* and *Bolboschoenus maritimus*.

Ecosystem services

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

Nationally important species occurring on the site.

Higher Plants.

The site holds several nationally scarce plants, including: *Hordeum marinum*, *Parapholis incurva*, *Polypogon monspeliensis*, *Puccinellia fasciculata*, *Bupleurum tenuissimum*, *Trifolium squamosum*, *Chenopodium chenopodioides*, *Inula crithmoides*, *Sarcocornia perennis*, *Salicornia pusilla*

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Birds**Species currently occurring at levels of national importance:****Species regularly supported during the breeding season:**

Mediterranean gull , <i>Larus melanocephalus</i> , Europe	10 apparently occupied nests, representing an average of 9.2% of the GB population (Seabird 2000 Census)
Black-headed gull , <i>Larus ridibundus</i> , N & C Europe	7050 apparently occupied nests, representing an average of 5.5% of the GB population (Seabird 2000 Census)
Sandwich tern , <i>Sterna</i> (<i>Thalasseus</i>) <i>sandvicensis sandvicensis</i> , W Europe	333 apparently occupied nests, representing an average of 3.1% of the GB population (Seabird 2000 Census)
Common tern , <i>Sterna hirundo hirundo</i> , N & E Europe	228 apparently occupied nests, representing an average of 2.2% of the GB population (Seabird 2000 Census)
Little tern , <i>Sterna albifrons albifrons</i> , W Europe	28 pairs, representing an average of 1.4% of the GB population (5 year mean 1991-1995)

Species with peak counts in spring/autumn:

Great cormorant , <i>Phalacrocorax carbo carbo</i> , NW Europe	271 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Little egret , <i>Egretta garzetta</i> , West Mediterranean	125 individuals, representing an average of 7.5% of the GB population (5 year peak mean 1998/9-2002/3)
Pied avocet , <i>Recurvirostra avosetta</i> , Europe/Northwest Africa	645 individuals, representing an average of 18.9% of the GB population (5 year peak mean 1998/9-2002/3)
Whimbrel , <i>Numenius phaeopus</i> , Europe/Western Africa	49 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian curlew , <i>Numenius arquata arquata</i> , N. a. <i>arquata</i> Europe (breeding)	3575 individuals, representing an average of 2.4% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	68 individuals, representing an average of 11.3% of the GB population (5 year peak mean 1998/9-2002/3)
Ruddy turnstone , <i>Arenaria interpres interpres</i> , NE Canada, Greenland/W Europe & NW Africa	600 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3)
Species with peak counts in winter:	
Northern shoveler , <i>Anas clypeata</i> , NW & C Europe	214 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian oystercatcher , <i>Haematopus ostralegus</i> <i>ostralegus</i> , Europe & NW Africa -wintering	3632 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)

European golden plover , *Pluvialis apricaria apricaria*, P. a. altifrons Iceland & Faroes/E Atlantic

4500 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)

Species Information

Nationally important species occurring on the site.

Invertebrates.

A total of more than twelve British Red Data Book species of wetland invertebrates have been recorded on the site, including:

Polystichus connexus, *Cephalops perspicuus*, *Peocilobothrus ducalis*, *Anagnota collini*, *Baris scolopacea*, *Berosus spinosus*, *Malachius vulneratus*, *Philonthus punctus*, *Malacostoma castrensis*, *Atylotus latistriatus*, *Campsicnemus magius*, *Cantharis fusca*, *Limonia danica*, *Lestes dryas*, *Hydrochus ignicollis*, *Hydrophilus piceus*, *Dicranomyia danica* and *Lejops vittata*.

23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Archaeological/historical site
- Environmental education/ interpretation
- Fisheries production
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Tourism
- Transportation/navigation

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

Ownership category	On-site	Off-site
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Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	
Private	+	+
Public/communal	+	+
Other	+	+

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	+
Collection of non-timber natural products: (unspecified)	+	
Fishing: commercial	+	+
Fishing: recreational/sport	+	+
Gathering of shellfish	+	
Bait collection	+	
Permanent arable agriculture		+
Permanent arable agriculture	+	+
Livestock watering hole/pond	+	+
Grazing (unspecified)	+	+
Hunting: recreational/sport	+	+
Industrial water supply	+	
Industry		+
Sewage treatment/disposal	+	+
Harbour/port	+	+
Flood control	+	
Transport route	+	+
Urban development		+
Non-urbanised settlements		+
Military activities		+

26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. *Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.*
2. *Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.*

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Water diversion for irrigation/domestic/industrial use	1		+	+	+
Dredging	1	Continued maintenance dredging for port facilities and jetties may be contributing to adverse effects, e.g. through removal of sediment from the estuary. Maintenance dredging is subject to regulation and will be assessed under a protocol currently being trialled by Defra.	+	+	+
Erosion	2		+		+
Eutrophication	2	The Medway shows symptoms of eutrophication, particularly growth of green algae which covers large areas of the intertidal mudflats in late summer. Studies by the Environment Agency also indicate that the waters in the Medway are hyper-nitrified for nitrogen and phosphorus.	+	+	+
Recreational/tourism disturbance (unspecified)	1		+		+
Transport infrastructure development	1	Construction of new road bridge on to Isle of Sheppey, resulting in loss of some designated habitat and disturbance during construction. Scheme was assessed under Habitats Regulations and compensatory habitat provided (outside current designated site).	+	+	+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?
 Erosion - The North Kent Coastal Habitat Management Plan (CHaMP) has been produced (Anon. 2002). The Environment Agency is to produce a Shoreline Management Plan/Flood Defence Strategy for the in the Medway and Swale and decisions on future flood risk management will need to take into account the effects on features within the designated sites.

Large-scale trials of mudflat recharge to address erosion.

Eutrophication - Water quality and sources of nutrient inputs are subject to further investigation by the

Environment Agency as part of the Agency's review of consents under the Habitats Regulations. Stage 3 of the Review of Consents (appropriate assessment) is scheduled for completion by March 2006, at which point any consented discharges having an adverse effect on site integrity will be identified.

Is the site subject to adverse ecological change? YES

27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	
Site management statement/plan implemented	+	
Environmentally Sensitive Area (ESA)	+	

b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Fauna.

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

Intertidal invertebrates and biotopes are being surveyed as part of a project on behalf of English Nature and the Medway Swale Estuary Partnership. Additional surveys are being carried out by the Environment Agency and the water industry to investigate the effects of (off-site) water abstraction on the invertebrate communities and birds associated with (on-site) fresh water flows.

Habitat.

ENSIS monitoring.

Experimental mudflat recharge using dredging spoil.

MNCR littoral and sublittoral survey.

Kent Wildlife Habitat Survey, and North Kent Marshes Saltmarsh Survey (Kent County Council);

Botanical survey of sea walls in north Kent, and study of factors affecting the occurrence of nationally scarce plant species on sea walls in north Kent SSSIs (English Nature)

Other

A carrying capacity study (for recreational uses) is currently being funded by the Medway Swale Estuary Partnership.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Gillingham Riverside Country Park.

E.ON Oakham Marsh Nature Reserve

The Medway Wildlife Ranger Service provides information to recreational boat users during peak season.

The Medway Swale Estuary Partnership publications and website (www.medway-swale.org.uk) provide information on the environmental features and uses of the estuary.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Activities, Facilities provided and Seasonality.

Yachting, angling, wildfowling, jet skiing, waterskiing, birdwatching. Bird watching occurs throughout the year and wildfowling is restricted to the period September to February. The remaining activities occur year-round but are more prevalent in the summer months. Disturbance from these activities is a current issue but is being addressed through further research, negotiation and information dissemination. In this context, a River Leisure Usage Survey has been carried out by the Medway Swale Estuary Partnership, and the Partnership is funding a carrying capacity study for recreational uses. The Kent Coastal Network is also organising a stakeholders working group to consider the impacts and management of jet-skis within this and other coastal sites in Kent.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs,

European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Site-relevant references

Anon. (2002) *North Kent Coastal Habitat Management Plan: Executive summary*. English Nature, Peterborough (Living with the Sea LIFE Project) www.english-nature.org.uk/livingwiththesea/project_details/good_practice_guide/HabitatCRR/ENRestore/CHaMPs/NorthKent/NorthKentCHaMP.pdf

Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)

Blair-Myers, CN (2003) *North Kent Marshes Saltmarsh Survey 2002*. Kent County Council, Maidstone

Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough

Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 5. Eastern England*. Joint Nature Conservation Committee, Peterborough

Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes*. Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)

- Burton, NHK, Jones, TE, Austin, GE, Watt, GA, Rehfisch, MM & Hutchins, CJ (2003) *Effects of reductions in organic and nutrient loading on bird populations in estuaries and coastal waters of England and Wales*. English Nature Research Reports, No. 586
- Carter Ecological Ltd. (2003) *Sea walls, North Kent Marshes 2002: Factors affecting the occurrence of nationally scarce plant species on sea walls in three North Kent SSSIs*. English Nature, Wye
- Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)
- Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge
- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
- English Nature (2001) *Swale and Medway European Marine Site: English Nature's advice given under Regulation 33(2) of the Conservation (Natural Habitats &c) Regulations 1994*. English Nature, Wye
- Godfrey, A (2003) *Grazing Marsh Invertebrate Project: Site-Specific Report. Final Report to the Environment Agency/English Nature*. Environment Agency, West Malling / English Nature, Wye
- Hill, TO, Emblow, CS & Northen, KO (1996) *Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)
- Kent County Council (1992) *North Kent Marshes study*. Kent County Council, Maidstone
- Medway Swale Estuary Partnership (2000) *Strategy for the Medway and Swale Estuary*. Medway Swale Estuary Partnership, Faversham
- Medway Swale Estuary Partnership (2001) *Medway and Swale River Leisure Usage Survey*. Medway Swale Estuary Partnership, Faversham
- Musgrove, AJ, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)
- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge.
www.wwt.org.uk/publications/default.asp?PubID=14
- North Kent Marshes Initiative (1997) *Medway Estuary and Swale Management Plan, Consultation draft*. North Kent Marshes Initiative
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Shirt, DB (ed.) (1987) *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough
- Stewart, A, Pearman, DA & Preston, CD (eds.) (1994) *Scarce plants in Britain*. Joint Nature Conservation Committee, Peterborough
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.)
www.jncc.gov.uk/UKSPA/default.htm
- Thames Estuary Conservation Group (n.d.) *The Thames estuary*. Thames Estuary Conservation Group
- Wiggington, M (1999) *British Red Data Books. 1. Vascular plants*. 3rd edn. Joint Nature Conservation Committee, Peterborough
- Williams, P (1996) *A survey of ditch flora in the North Kent Marshes SSSIs, 1995*. English Nature Research Reports, No. 167
- Williams, P & Ware, C [1997] *Ditch communities on the North Kent Marshes SSSIs*. English Nature Research Reports, No. 289
- Worsfold, TM, Grist, NC & Hunter, P (2004) *Review of intertidal invertebrate data available for the Medway, Swale and North Kent Marshes estuary systems, with recommendations for future work*. Medway Swale Estuary Partnership, Faversham

Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: ramsar@ramsar.org