

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:

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 24 March 1994

3. Country:

UK (England)

4. Name of the Ramsar site:

Dengie (Mid-Essex Coast Phase 1)

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 41 26 N 00 57 34 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: Colchester

Dengie is a large and remote area of tidal mudflat and saltmarsh at the eastern end of the Dengie Peninsula, between the Blackwater and Crouch Estuaries in Essex.

Administrative region: Essex

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 3127.23

Min.	-1
Max.	3
Mean	0

12. General overview of the site:

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

Dengie is a large and remote area of tidal mudflat and saltmarsh at the eastern end of the Dengie peninsula, between the Blackwater and Crouch Estuaries. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora. It hosts internationally and nationally important wintering populations of wildfowl and waders, and in summer supports a range of breeding coastal birds including rarities. The formation of cockleshell spits and beaches is of geomorphological interest.

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).

1, 2, 3, 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 1

Qualifies by virtue of the extent and diversity of saltmarsh habitat present. Dengie, and the four other sites in the Mid-Essex Coast Ramsar site complex, includes a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.

Ramsar criterion 2

Dengie supports a number of rare plant and animal species. The Dengie has 11 species of nationally scarce plants: sea kale *Crambe maritima*, sea barley *Hordeum marinum*, golden samphire *Inula crithmoides*, lax flowered sea lavender *Limonium humile*, the glassworts *Sarcocornia perennis* and *Salicornia pusilla*, small cord-grass *Spartina maritima*, shrubby sea-blite *Suaeda vera*, and the eelgrasses *Zostera angustifolia*, *Z. marina* and *Z. noltei*. The invertebrate fauna includes the following Red Data Book species: a weevil *Baris scolopacea*, a horsefly *Atylotus latistriatus* and a jumping spider *Euophrys browningi*.

Ramsar criterion 3

This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

43828 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 winter:

Dark-bellied brent goose, <i>Branta bernicla bernicla</i> ,	2000 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)
Grey plover , <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering	4582 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3)
Red knot , <i>Calidris canutus islandica</i> , W & Southern Africa (wintering)	14528 individuals, representing an average of 3.2% of the 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 winter:

Bar-tailed godwit , <i>Limosa lapponica lapponica</i> , W Palearctic	2593 individuals, representing an average of 2.1% of the population (5 year peak mean 1998/9-2002/3)
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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.

See Sections 21/22 for details of noteworthy species

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	neutral, shingle, sand, mud, clay, alluvium, nutrient-rich, sedimentary, gravel
Geomorphology and landscape	lowland, coastal, shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay)
Nutrient status	eutrophic
pH	circumneutral
Salinity	saline / euhaline
Soil	mainly organic
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Lowestoft, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html) Max. daily temperature: 13.0° C Min. daily temperature: 7.0° C Days of air frost: 27.8 Rainfall: 576.3 mm Hrs. of sunshine: 1535.5

General description of the Physical Features:

Dengie is a large and remote area of tidal mudflats and saltmarshes at the eastern end of the Dengie peninsula, between the adjacent Blackwater and Crouch estuaries. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora.

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).

Dengie is a large and remote area of tidal mudflats and saltmarshes at the eastern end of the Dengie peninsula, between the adjacent Blackwater and Crouch estuaries. The saltmarsh is the largest continuous example of its type in Essex.

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

19. Wetland types:

Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	90.4
H	Salt marshes	5
M	Rivers / streams / creeks: permanent	2.1
Other	Other	1
E	Sand / shingle shores (including dune systems)	1
5	Salt pans, salines	0.5

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 foreshore is a large continuous area of mudflat extending nearly 13 km along the exposed eastern-facing frontage. It has abundant invertebrate fauna including molluscs, marine worms and Crustacea. It is composed of mud, silt and sand with varying amounts of shell or shingle forming firmer areas. Vegetation is limited to algal species such as *Enteromorpha* and eelgrass (three species recorded - *Zostera angustifolia*, *Z. marina* and *Z. noltlei*).

There is a transition between the flats and the eroding saltmarsh frontage comprising *Enteromorpha*-draped mud mounds with shell-lined gullies between. Cord-grass *Spartina* spp. is a constituent of the narrow zone marking the seaward limit of the saltmarsh proper, or forms occasional isolated stands in wet depressions on the main saltmarsh.

The saltmarsh extends in a more-or-less continuous zone north to south from Sales Point to Coaste Outfall. It is highly dissected by drainage channels. Saltmarsh-grass *Puccinellia* spp. is dominant or co-dominant with sea purslane *Atriplex portulacoides* over extensive areas, with sea aster *Aster tripolium*, annual sea-blite *Suaeda maritima* and sea lavender *Limonium vulgare* scattered throughout. However, wetter areas are colonised with sea lavender and glasswort *Salicornia* spp. especially just out from the seawall foot where a typical association includes these species with sea-arrow grass *Triglochin maritima*. These, together with sea aster and tufts of sea purslane, also form an open community on the weathered seaward edge of the saltmarsh where the much rarer lax-flowered sea lavender *L. humile* is also found. Glasswort is found in pure stands on low banks and shelves within the creeks throughout the saltmarsh area. Sea purslane lines the naturally slightly embanked edges of creeks or drains, have vegetation dominated by sea couch grass *Elytrigia atherica*. The large banks provide a foothold for shrubby sea-blite *Suaeda vera*, a national rarity, which also occurs as isolated bushes along the seawall face.

Open shell-sand beaches encroach inland over saltmarsh, forming hooks and banks mostly in the St Peter's Flat area. These support sparse strandline flora such as orache species *Atriplex littoralis* and *A. hastata*. Sea sandwort *Honkenya peploides* and sticky groundsel *Senecio viscosus*, but include nationally or locally rare species such as sea kale *Crambe maritima*, yellow horned-poppy *Glaucium flavum*, sea rocket *Cakile maritima* and shrubby sea-blite.

Seawall, folding and borrow-dyke run the entire length of the site and are included within the boundary. The seaward side of the wall is species-poor, mostly sea couch, but has shrubby sea-blite and golden samphire *Inula crithmoides* in places. The landward side and folding are unimproved semi-natural grassland, and sections are herb rich with many leguminous species, including grass vetchling *Lathyrus nissolia* and sea clover *Trifolium squamosum*. The rare sea barley *Hordeum marinum* grows on bare clay patches arising from salt seepages. Meadow pipit and skylark nest in the rough grass of the folding, and shelduck breed in holes under shrubby sea-blite bushes on the outer edge of the seawall. The borrow-dykes contain brackish water with large communities of sea club-rush *Bolboschoenus maritimus* or common reed *Phragmites australis*. In places salt leaching produces saltmarsh species along the borrow-dyke edge including sea aster, sea purslane, saltmarsh grass and glasswort. Sea milkwort *Glaux maritima* is also recorded.

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.

Hordeum marinum (nationally scarce), *Inula crithmoides* (nationally scarce), *Limonium humile* (nationally scarce), *Sarcocornia perennis* (nationally scarce), *Salicornia pusilla* (nationally scarce), *Spartina maritima* (nationally scarce), *Suaeda vera* (nationally scarce), *Zostera angustifolia* (nationally scarce), *Z. marina* (nationally scarce), *Z. noltei* (nationally scarce).

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 with peak counts in spring/autumn:

Ringed plover , <i>Charadrius hiaticula</i> , Europe/Northwest Africa	325 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	225 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	17 individuals, representing an average of 2.8% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Red-throated diver , <i>Gavia stellata</i> , NW Europe	101 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)
Hen harrier, <i>Circus cyaneus</i> , Europe	<19 individuals, representing an average of 2.5% of the GB population (5 year mean 1987-1991)
Dunlin , <i>Calidris alpina alpina</i> , W Siberia/W Europe	10494 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.**

Baris scolopacea (RDB3), *Atylotus latistriatus* (RDB3), *Euophrys browningi* (rare and endemic to Great Britain. A UKBAP species).

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
 Non-consumptive recreation
 Religious
 Scientific research
 Sport fishing
 Sport hunting
 Tourism

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
Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	+
Private	+	+
Public/communal	+	

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+

Recreation	+	+
Current scientific research	+	
Fishing: commercial	+	+
Fishing: recreational/sport	+	+
Gathering of shellfish	+	
Bait collection	+	+
Permanent arable agriculture	+	+
Permanent pastoral agriculture	+	+
Hunting: recreational/sport	+	+
Industrial water supply		+
Harbour/port		+
Flood control	+	+
Irrigation (incl. agricultural water supply)		+
Oil/gas exploration		+
Transport route		+
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?
Erosion	2		+		+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?
 Erosion - The Essex Coast and Estuaries Coastal Habitat Management Plan (CHaMP) (Anon. 2002) covers the site and it is expected to inform the shoreline management plan as well as local plan policies.

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)	+	+
National Nature Reserve (NNR)	+	+
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	
Site management statement/plan implemented	+	
Special Area of Conservation (SAC)	+	

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.

Environmental Agency Low tide counts, saltmarsh monitoring and experimental polders - slowing erosion.

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.

Bradwell Power Station has a visitor centre that uses the Dengie for guided tours.

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.

Sea Angling: all year - no facilities.

Birdwatching: all year - hides.

Bait digging: all year - no facilities.

Walkers/dog walkers - all year - no facilities on site.

Wildfowling: winter season - no facilities.

Sailing: all year - no facilities.

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) *Essex Coast and Estuaries Coastal Habitat Management Plan: Executive summary*. English Nature, Peterborough (Living with the Sea LIFE Project). www.english-nature.org.uk/livingwiththesea/champs/pdf/ESSEX.FINALEXEC.SUMMARY.pdf
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- 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.)
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Worley, A & Simpson, M (1998) Littoral and sublittoral biotope mapping and data capture exercise for the Essex estuaries candidate Marine Special Area of Conservation. *English Nature Research Reports*, No. 305

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