# **Information Sheet on Ramsar Wetlands** (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

## Note for compilers:

- 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	<ol><li>Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.</li></ol>
1	1. Name and address of the compiler of this form: FOR OFFICE USE ONLY.
	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
	2. Date this sheet was completed/updated: Designated: 14 July 1992 / updated 12 May 2005
3	3. Country: UK (Wales)
2	4. Name of the Ramsar site: Burry Inlet
	5. Map of site included: Refer to Annex III of the Explanatory Notes and Guidelines, for detailed guidance on provision of suitable maps.
á	a) hard copy (required for inclusion of site in the Ramsar List): yes $\checkmark$ -or- no $\square$
1	b) digital (electronic) format (optional): Yes
(	6. Geographical coordinates (latitude/longitude): 51 38 55 N 04 10 37 W
I 1 1	7. 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: Swansea The site is located between the Gower Peninsula and Llanelli in south Wales, approximately 15 km north-west of Swansea. Administrative region: Abertawe/ Swansea; Caerfyrddin/ Carmarthenshire
	8. Elevation (average and/or max. & min.) (metres): 9. Area (hectares): 6672  Min2 (2005 calculation, no boundary change)  Max. 6  Mean 1

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### 10. Overview:

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

Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales. It includes extensive areas of intertidal sand and mud flats, together with large sand dune systems at the mouth of the estuary. The site contains the largest continuous area of saltmarsh in Wales (2,200 ha). The Burry Inlet regularly supports large numbers of wildfowl and waders.

### 11. 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).

5, 6

Secretariat comment: The RIS provides information requiring the application of Criteria 2 and 4. These need to be included in the next update.

# 12. Justification for the application of each Criterion listed in 11. 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 5

# Assemblages of international importance:

## Species with peak counts in winter:

41655 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:

Northern pintail, Anas acuta, NW Europe 2687 individuals, representing an average of

4.4% of the population (5 year peak mean

1998/9-2002/3)

Eurasian oystercatcher, *Haematopus ostralegus* 14861 individuals, representing an average of ostralegus, Europe & NW Africa -wintering 1.4% 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:

Northern shoveler, *Anas clypeata*, NW & C
Europe

467 individuals, representing an average of 1.1% 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 occuring at levels of National importance are given in Section 20

# **13. 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

## 14. 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	acidic, shingle, sand, mud, clay, nutrient-rich, sedimentary, quartzite, limestone, sandstone, slate/shale,
	sandstone/mudstone, peat, gravel, pebble, cobble, boulder
Geomorphology and landscape	lowland, coastal, intertidal sediments (including
	sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), estuary, ria, intertidal rock
Nutrient status	eutrophic
pH	alkaline
Salinity	saline / euhaline
Soil	mainly organic
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Tenby, 1971–2000)
	(www.metoffice.com/climate/uk/averages/19712000/sites /tenby.html)
	Max. daily temperature: 13.4° C
	Min. daily temperature: 7.0° C
	Days of air frost: 9.5
	Rainfall: 1106.5 mm
	Hrs. of sunshine: 1654.0

## **General description of the Physical Features:**

Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales. It includes extensive areas of intertidal sand- and mud-flats, together with large sand dune systems at the mouth of the estuary. The site contains the largest continuous area of saltmarsh in Wales (2,200 ha). The estuary experiences wide tidal fluctuations (about 8 m) which has the consequence of exposing a large extent of intertidal sediments on a regular basis. These are mostly sandy, but muddy substrates are to be found in more sheltered areas.

## 15. 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).

Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales. It includes extensive areas of intertidal sand- and mud-flats, together with large sand dune systems at the mouth of the estuary. The site contains the largest continuous area of saltmarsh in Wales (2,200 ha). The estuary experiences wide tidal fluctuations (about 8 m) which has the consequence of exposing a large extent of intertidal sediments on a regular basis. These are mostly sandy, but muddy substrates are to be found in more sheltered areas.

## 16. 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, Maintenance of water quality (removal of nutrients)

# 17. Wetland types

Marine/coastal wetland

Code	Name	% Area
D	Rocky shores	0.1
Е	Sand / shingle shores (including dune systems)	2.2
F	Estuarine waters	8
G	Tidal flats	59.4
Н	Salt marshes	30.3

## 18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

The Burry Inlet is a large estuarine complex located between the Gower Peninsula and Llanelli in South Wales. It includes a mixture of estuarine habitats, river channel, extensive intertidal sand and mud flats, intertidal and rocky shore habitats, and a large sand-dune system at the mouth of the estuary. A range of intertidal communities support populations of important animals like piddocks, and rockpool communities.

The estuary supports typical saltmarsh communities, and is the largest continuous saltmarsh in Wales, supporting nationally scarce plants such as marsh-mallow *Althaea officinalis*.

The river channel and estuarine water is known to support important fish, namely shad and lamprey. Otters use the channel to feed.

The importance of the sand dunes at the western end of the Ramsar site are recognised at a European level through designation as SAC, supporting dune-slack communities where three British Red Data Book plants grow – fen orchid *Liparis loeselii*, dune gentian *Gentianella uliginosa* and early sand-grass *Mibora minima*.

### 19. 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.* 

Petalwort Petalophyllum ralfsii Status: Habitats Directive Annex II feature (S1395),

Nationally Scarce

Variegated horsetail *Equisetum variegatum*Long-stalked orache *Atriplex longipes*One-flowered glasswort *Salicornia pusilla*Status: Nationally Scarce
Status: Nationally Scarce

Marsh-mallow *Althaea officinalis* Status: Nationally Scarce Hutchinsia *Hornungia petraea* Status: Nationally Scarce

Round-leaved wintergreen Pyrola rotundifolia ssp. maritima Status: Nationally Scarce

Portland spurge *Euphorbia portlandica* Status: Nationally Scarce Musk stork's-bill *Erodium moschatum* Status: Nationally Scarce

Dune gentian Gentianella uliginosa Status: Red Data Book

White horehound *Marrubium vulgare* Status: Nationally Scarce

Eelgrass Zostera angustifolia Status: Nationally Scarce

Sharp rush *Juncus acutus* Status: Nationally Scarce
Early sand-grass *Mibora minima* Status: Red Data Book
Dune fescue *Vulpia fasciculata* Status: Nationally Scarce

Green-flowered helleborine Epipactis phyllanthes Status: Nationally Scarce

Status: Habitats Directive Annex II feature (S1903); Red Data Book Fen orchid *Liparis loeselii* species; Wildlife & Countryside Act Schedule 8

## 20. 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:

Common redshank, Tringa totanus totanus,

Little egret, Egretta garzetta, West

Mediterranean

Whimbrel, Numenius phaeopus,

Europe/Western Africa

Eurasian curlew, Numenius arquata arquata, N.

a. arquata Europe

(breeding)

Common greenshank, Tringa nebularia,

Europe/W Africa

Species with peak counts in winter:

Dark-bellied brent goose, Branta bernicla

bernicla.

Common shelduck, Tadorna tadorna, NW

Europe

Grey plover, Pluvialis squatarola, E Atlantic/W

Africa -wintering

Dunlin, Calidris alpina alpina, W Siberia/W

Europe

Red knot, Calidris canutus islandica, W &

Southern Africa

(wintering)

Spotted redshank, Tringa erythropus, Europe/W

Africa

**Species Information** 

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Polychaete worm Ophelia bicornis Status: Nationally Rare

Status: Habitats Directive Annex II feature Narrow-mouthed whorl snail *Vertigo angustior* 

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(S1014); British Red Data Book

Sea lamprey *Petromyzon marinus* Status: Habitats Directive Annex II feature (S1095) River lamprey *Lampetra fluviatilis* Status: Habitats Directive Annex II feature (S1099)

Allis shad *Alosa alosa* Status: Habitats Directive Annex II feature (S1102)

Status: Habitats Directive Annex II feature (S1103) Twaite shad *Alosa fallax* 

Otter Lutra lutra Status: Habitats Directive Annex II feature (S1355)

857 individuals, representing an average of 0.7%

of the GB population (5 year peak mean 1998/9-

2002/3)

63 individuals, representing an average of 3.8% of

the GB population (5 year peak mean 1998/9-

2002/3)

241 individuals, representing an average of 8% of

the GB population (5 year peak mean 1998/9-

2002/3 - spring peak)

2231 individuals, representing an average of 1.5%

of the GB population (5 year peak mean 1998/9-

2002/3)

47 individuals, representing an average of 7.8% of

the GB population (5 year peak mean 1998/9-

2002/3)

1097 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-

2002/3)

1093 individuals, representing an average of 1.3%

of the GB population (5 year peak mean 1998/9-

2002/3)

530 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-

2002/3)

6758 individuals, representing an average of 1.2%

of the GB population (5 year peak mean 1998/9-

2002/3)

3618 individuals, representing an average of

1.2% of the GB population (5 year peak mean

1998/9-2002/3)

15 individuals, representing an average of 11% of the GB population (5 year peak mean 1998/9-

**Burry Inlet** 

2002/3)

# 21. Social and 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

Subsistence fishing

Tourism

# 22. Land tenure/ownership:

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

# 23. 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	+	
Rough or shifting grazing	+	
Hunting: recreational/sport	+	
Industry	+	
Sewage treatment/disposal		+
Harbour/port	+	
Flood control	+	

# 24. Factors adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

- 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.
- 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.

Erosion  1 Sea-level rise and/or changes in the frequency of storms,	Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Saturiarsh habitat distribution on the site.	Erosion	1	natural sediment transition as a result of the natural breach of the old 'training wall' and channel realignment causes changing patterns of sediment deposition and erosion.  Studies suggest that overall erosion rates are more or less matched by sediment accretion.  Erosion of /loss of Salicornia zone is occurring – loss of	+	+	

For	category	2	factors	on	ly.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Is the site subject to adverse ecological change? NO

# 25. 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	+	
Other	+	
Area of Outstanding National Beauty (AONB)	+	+
Special Area of Conservation (SAC)	+	
Management plan in preparation	+	

# 26. Conservation measures proposed but not yet implemented:

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

No information available

#### 27. Current scientific research and facilities:

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

## Contemporary.

### 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.

Wintering wildfowl and waders are monitored annually on North Shore only, by Wildfowl and Wetlands Trust (Penclacwydd Reserve, Llandelli).

The Catchment Research Group (Cardiff University) annually ring oystercatchers (since 1990). Current research into relationship between oystercatchers and shellfish populations in Burry Inlet ongoing since 2000 (CEFAS 2001; Mercer 2002; McGrorty & West 2001; Stewart 2001; West *et al.* 2001).

# Completed.

### Flora.

Sand dune NVC survey by Dargie (1989); saltmarsh vegetation surveyed by Burd (1987), with follow-up saltmarsh NVC survey 1998-99.

Marine.

CCW Phase I Survey of the marine intertidal biotopes of the Burry estuary in 2000 (CCW 2004).

#### 28. Current conservation education:

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

North shore: Wildfowl and Wetlands Trust have education centre at Penclacwydd, Llanelli with a full-time education officer. School parties form major element of the conservation education programme.

South shore: Guided walks and a bird hide are available at Whiteford NNR.

## 29. 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.

Principally walking, birdwatching, sport angling and and wildfowling. All these activities are at sustainable levels.

### 30. Jurisdiction:

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

Head, Countryside Division, Welsh Assembly Government, Cathays Park, Cardiff, CF1 3NO

## 31. 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 Safeguard Officer, International Designations, Countryside Council for Wales, Maes-y-Ffynnon, Penrhosgarnedd, Bangor, Gwynedd, LL57 2DW

# 32. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

## Site-relevant references

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- Barne, JH, Robson, CF, Kaznowska, SS & Doody, JP (eds.) (1995) Coasts and seas of the United Kingdom. Region 12. Wales: Margam to Little Orme. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)
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- CEFAS (2001) The relationship between mussel and oystercatcher populations in the Burry Inlet, Part 1b, Section 3 a report on the cockle stocks in the Burry Inlet, south Wales, outside the standard CEFAS survey area. *CCW Contract Science*, No. **431**
- Countryside Council for Wales (1993) Welsh estuaries review. Countryside Council for Wales, Bangor
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- 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
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