RAMSAR INFORMATION SHEET

FOR WETLANDS OF INTERNATIONAL IMPORTANCE

Site reference number		7UK		
1	Compilation date	October 2001		
2	Country	UK (Scotland)		
3	Name of wetland	Firth of Forth		
4	Site centre location:	Latitude: 56 01 00 N	Longitude: 02 53 00 W	
5	Altitude (m)	Min: Max:	Mean	
6	Area (ha)	6313.72		

7 Overview

The Firth of Forth is a large coastal area comprising a complex of estuaries, mudflats, rocky shorelines, beaches and saltmarshes. It stretches from Alloa Inches in the River Forth out to Fife Ness and Dunbar in the east. It is considered to act as a single ecological unit. Several large urban areas, including Edinburgh, are adjacent to the site and these include several areas of heavy industry. Furthermore the Forth is one of the most important shipping areas in Scotland. The site is important for a large number of wintering waders and wildfowl, many in nationally and internationally important numbers.

8 Wetland type Marine/coastal wetland

Code	Name	% Area
D	Rocky shores	9.5
Е	Sand / shingle shores (including dune systems)	11
G	Tidal flats	74
Н	Salt marshes	4.5
J	Coastal brackish / saline lagoons	1

9	Ramsar Criteria		5, 6
10	Map of the site		\checkmark
11	Compiler		Joint Nature Conservation Committee
			Monkstone House
			City Road
			Peterborough
			Cambridgeshire PE1 1JY
			UK
	Telephone/Fax	:	+44(0) 1733 562626 / +44(0) 1733 555948

5 6

12 Justification of criteria

Damaan Cuitania

Λ

Ramsar criterion 5

Internationally important waterfowl assemblage (greater than 20,000 birds)

Ramsar criterion 6

Over winter the site regularly supports internationally important populations of: Bar-tailed Godwit *Limosa lapponica*, Goldeneye *Bucephala clangula*, Knot *Calidris canutus*, Pink-footed Goose *Anser brachyrhynchus*, Redshank *Tringa totanus*, Sandwich Tern *Sterna sandvicensis*, Shelduck *Tadorna tadorna*, Slavonian Grebe *Podiceps auritus*, Turnstone *Arenaria interpres*

13 General location

The site is on the east coast of Scotland Administrative Region: Lothian, Fife, Central

14 Physical Features

Soil & Geology	mud, sand, shingle
Geomorphology and Landscape	coastal, estuary, intertidal rock, intertidal sediments (including sandflat/mudflat), lagoon, open coast (including bay)
Nutrient status	
pH	no information
Salinity	brackish / mixosaline, saline / euhaline
Soil	no information
Water permanence	
Summary of main climatic features	Rainy, temperate climate with a mild winter and periodic frost. Mean minimum temperature approximately 5.9°C. Mean maximum temperature approximately 13.6°C. Mean annual precipitation approximately 732.6mm, with a winter maximum.

15 Hydrological values

Shoreline stabilisation and dissipation of erosive forces

16 Ecological features

The site is mostly invertebrate rich intertidal mud and sandflats. Fairly extensive areas of saltmarsh exist primarily on the south coast while at Alloa Inches there is a small Phragmites reedbed.

17 Noteworthy flora

18 Noteworthy fauna

Birds

Species occurring at levels of international importance (as identified at designation):

Over winter the area regularly supports:

Bar-tailed Godwit, <i>Limosa lapponica</i> (Western Palearctic (wintering))	1974 individuals, representing an average of 2% of the population (1993/94 - 1997/98)
Goldeneye, <i>Bucephala clangula</i> (North-western/Central Europe)	3004 individuals, representing an average of 1% of the population (1993/94 - 1997/98)
Knot, <i>Calidris canutus</i> (North-eastern Canada/Greenland/Iceland/North- western Europe)	9258 individuals, representing an average of 3% of the population (1993/94 - 1997/98)
Pink-footed Goose, Anser brachyrhynchus (Eastern Greenland/Iceland/UK)	10852 individuals, representing an average of 6% of the population (1993/94 - 1997/98)
Redshank, <i>Tringa totanus</i> (Eastern Atlantic (wintering))	4341 individuals, representing an average of 3% of the population (1993/94 - 1997/98)
Sandwich Tern, Sterna sandvicensis (Western Europe/Western Africa)	1617 individuals, representing an average of 1% of the population (1993/94 - 1997/98)
Shelduck, <i>Tadorna tadorna</i> (North-western Europe)	4509 individuals, representing an average of 2% of the population (1993/94 - 1997/98)
Slavonian Grebe, Podiceps auritus	84 individuals, representing an average of 2% of

(North-western Europe)

Turnstone, *Arenaria interpres* (Western Palearctic (wintering)) the population (1993/94 - 1997/98)

860 individuals, representing an average of 1% of the population (1993/94 - 1997/98)

Species currently occurring at levels of national importance:

Over winter the area regularly supports:

Common Scoter, *Melanitta nigra* (Western Siberia/Western & Northern Europe/North-western Africa)

Cormorant, *Phalacrocorax carbo* (North-western Europe)

Curlew, *Numenius arquata* (Europe (breeding))

Dunlin, *Calidris alpina alpina* (Northern Siberia/Europe/Western Africa)

Eider, *Somateria mollissima* (Britain/Ireland)

Golden Plover, *Pluvialis apricaria* (North-western Europe (breeding))

Great Crested Grebe, *Podiceps cristatus* (North-western Europe (wintering))

Grey Plover, *Pluvialis squatarola* (Eastern Atlantic (wintering))

Long-tailed duck, *Clangula hyemalis* (Iceland/Greenland)

Oystercatcher, *Haematopus ostralegus* (Europe & Northern/Western Africa)

Red-breasted Merganser, *Mergus serrator* (North-western/Central Europe)

Red-throated Diver, *Gavia stellata* (North-western Europe (wintering))

Ringed Plover, *Charadrius hiaticula* (Europe/Northern Africa (wintering))

Scaup, *Aythya marila* (Northern/Western Europe)

Velvet Scoter, Melanitta fusca

2880 individuals, representing an average of 10.5% of the GB population (1992/93 - 1996/97)

682 individuals, representing an average of 5.2% of the GB population (1992/93 - 1996/97)

1928 individuals, representing an average of 1.7% of the GB population (1992/93 - 1996/97)

9514 individuals, representing an average of 1.8% of the GB population (1992/93 - 1996/97)

9400 individuals, representing an average of 12.1% of the GB population (1992/93 - 1996/97)

2949 individuals, representing an average of 1.2% of the GB population (1993/94 - 1997/98)

646 individuals, representing an average of 6.6% of the GB population (1992/93 - 1996/97)

724 individuals, representing an average of 1.7% of the GB population (1992/93 - 1996/97)

1045 individuals, representing an average of 4.4% of the GB population (1992/93 - 1996/97)

7846 individuals, representing an average of 2.2% of the GB population (1992/93 - 1996/97)

670 individuals, representing an average of 6.7% of the GB population (1992/93 - 1996/97)

90 individuals, representing an average of 1.9% of the GB population (1993/94 - 1997/98)

328 individuals, representing an average of 1.1% of the GB population (1992/93 - 1996/97)

381 individuals, representing an average of 3.5% of the GB population (1992/93 - 1996/97)

635 individuals, representing an average of 21.2% of the GB population (1992/93 - 1996/97)

19 Social and Cultural Values

Aesthetic Archaeological/historical site Conservation education Current scientific research Non-consumptive recreation Sport fishing Sport hunting Tourism Transportation/navigation

20 Land tenure/ownership

Ownership category	On-Site	Off-Site
Non-governmental organisation	+	+
Local authority, municipality etc.	+	+
National/Crown estate	+	+
Private	+	+
Public/communal	+	+

21 Current land use

Activity	On-Site	Off-Site	Scale
Nature conservation	+		Large-Scale
Tourism	+	+	Large-Scale
Recreation	+	+	Large-Scale
Research	+		Small-Scale
Commercial forestry		+	Small-Scale
Fishing: recreational/sport	+		Small-Scale
Bait collection	+		Large-Scale
Arable agriculture (unspecified)		+	Large-Scale
Permanent arable agriculture		+	Large-Scale
Hunting: recreational/sport	+	+	Small-Scale
Industry		+	Large-Scale
Sewage treatment/disposal	+	+	Large-Scale
Harbour/port	+	+	Large-Scale
Mining	+		Small-Scale
Transport route	+	+	Large-Scale
Urban development		+	Large-Scale
Non-urbanised settlements		+	Small-Scale
Military activities	+	+	Small-Scale

22 Adverse factors affecting the ecological character of the site

Activity	On-Site	Off-Site	Scale
Unspecified development: industry		+	Small-Scale

23 Conservation measures taken

Conservation measure	On-site	Off-site
SSSI	+	
SPA	+	
Land owned by a NGO for nature conservation	+	
Management agreement	+	

24 Conservation measures proposed but not yet implemented see below

Site vulnerability and management statement

While the major factor potentially affecting the site is coastal industrial development, such development is subject to detailed planning control, ensuring that the site is not significantly affected. Oil and other industrial developments concentrated along the shore line do pose a threat, however rigorous emergency contingency plans are in place to minimise the impact of any incident. Localised tipping is an ongoing problem but consists mainly of inert building waste and is mostly controlled by the relevant licensing authority. Implementation of the Habitats Regulations will tighten control on these operations. Recreational pressures, including small-scale bait digging, are not currently considered to be a problem, while commercial bait digging is being monitored. The potential for rising sea levels to remove important habitats is recognised, and a number of coastal realignment schemes (planned retreat) are planned for these areas which will go some way to offsetting any habitat loss.

25 Current scientific research/survey/monitoring and facilities

WeBS counts are done between September and April each year.

An annual late summer bird count is also carried out.

Aberlady Bay is often used for under-graduate and post-graduate research projects

26 Current conservation education

Aberlady Bay and Torry Bay Local Nature Reserves and the John Muir Country Park all have fulltime rangers/wardens who lead some guided walks and other educational activities.

27 Current recreation and tourism

Many people use the areas adjoing the Firth for recreation. Walking, dog-walking, horse-riding and bathing are all common in many parts of the Forth. There is some evidence to suggest that the distribution of some bird species may be influenced by increased activity on the coast particularly in East Lothian. On the whole these activities are not considered detrimental to the site and visitor access is managed to minimise any negative effects. This includes specific locations and periods when public access may be restricted (eg the tern colony at Aberlady Bay).

The sea is also used for activities such as wind-surfing, canoeing and yachting. There is no evidence to suggest any of these are detrimental.

28 Functional jurisdiction

Scottish Office, Agriculture, Environment and Fisheries Department

29 Management authority

Scottish Natural Heritage Forth and Borders Area Office Laundry House Dalkeith Country Park Dalkeith Midlothian EH22 2NA tel 0131 654 2466 fax 0131 654 2477

30 Bibliography

Anon. 1995. Biodiversity: the UK Steering Group report. Volume 2: action plans. London, HMSO.

- Barne, J.H., Robson, C.F., Kaznowska, S.S., Doody, J.P., Davidson, N.C., & Buck, A.L. eds. 1996-1998. Coasts and seas if the United Kingdom. Regions 1-17. Peterborough Joint Nature Conservation Committee.
- Batten, L.A., Bibby, C.J., Elliott, G.D., & Porter, R.F., eds. 1990. Red Data birds in Britain: action for rare, threatened and important species. London, T & A. D. Poyser.
- Bignal, E., Curtis, D., & Matthews, J. 1988. Islay: land types, bird habitats and nature conservation. Part 1. Land types and birds on Islay. CSD Reports, No. 809, Part 1.
- Bratton, J.H., ed. 1991. British Red Data Books: 3. Invertebrates other than insects. Peterborough, Joint Nature Conservation Committee.

- Brown, A.E., Burn, A.J., Hopkins, J.J., & Way, S.F., eds. 1997. The Habitats Directive: selection of Special Areas of Conservation in the UK. JNCC Reports, No. 270. Peterborough, Joint Nature Conservation Committee.
- Buck, A.L. 1993, 1996, 1997. An inventory of UK estuaries. Volume 2-7. Peterborough, Joint Nature Conservation Committee.
- Chandler, T.J., & Gregory, S., eds. 1976. The climate of the British Isles. London, Longman.
- Cranswick, P.A., Waters, R.J., Musgrove, A.J. & Politt, M.S. 1997. The Wetland Bird Survey 1995-96: wildfowl and wader counts. Slimbridge, British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee.
- Dargie, T.C.D. 1993. Sand dune vegetation survey of Great Britain: a national inventory. Part 2. Scotland. Peterborough, Joint Nature Conservation Committee.
- Department of the Environment. 1995. Biodiversity: The UK Steering Group Report. Volume 1: Meeting the Rio Challenge. London, HMSO.
- Department of the Environment, Transport and the Regions. 1998. UK National Report to the 7th Meeting of the Conference of the Contracting Parties. Peterborough, Joint Nature Conservation Committee.
- Doody, J.P., Johnston, C., & Smith, B. 1993. Directory of the North Sea coastal margin. Peterborough, Joint Nature Conservation Committee
- Drury Hunt, I. & MacGuire, F., eds. 1996. High and Dry: The impacts of over-abstraction of water on wildlife. Biodiversity Challenge. Sandy, RSPB.
- English Nature. Natural Areas; Nature Conservation in Context version 1.1. CD-ROM. English Nature, Peterborough.
- English Nature. 1996. Impact of Water Abstraction on Wetland SSSIs. English Nature Freshwater Series Number 4. Peterborough, English Nature.
- Perring, F.H., & Farrell, L. 1983. British Red Data Books: 1. Vascular plants. Nettleham, Lincoln, Royal Society for Nature Conservation.
- Pritchard, D.E., Housden, S.D., Mudge, G.P., Galbraith, C.A. & Pienkowski, M.W., eds. 1992. Important Bird Areas in the United Kingdom including the Channel Islands and the Isle of Man. Sandy, Royal Society for the Protection of Birds.
- Ratcliffe, D.A., ed. 1977. A nature conservation review: volumes 1 & 2. Cambridge, Cambridge University Press.
- Rodwell, J.S., ed. 1991. British plant communities. Volume 2. Mires and heaths. Cambridge, Cambridge University Press.
- Rodwell, J.S., ed. 1995. British plant communities. Volume 4. Aquatic communities, swamps and tall-herb fens. Cambridge, Cambridge University Press.
- Rose, P.M. & Scott, D.A. 1997. Waterfowl Population Estimates Second edition. Wageningen, Wetlands International.
- Royal Society for the Protection of Birds. 1998. Land for Life. Sandy, Royal Society for the Protection of Birds.
- Shirt, D.B., ed. 1987. British Red Data Books: 2. Insects. Peterborough, Nature Conservancy Council.
- Stewart, A., Pearman, D.A., & Preston, C.D., eds. 1994. Scarce plants in Britain. Peterborough, Joint Nature Conservation Committee.
- Stroud, D.A., Mudge, G.P. and Pienkowski, M. W., eds. 1990. Protecting Internationally Important Bird Sites. Peterborough, Nature Conservancy Council.

Reference should also be made to Country Agencies Management Plans for sites that are within National Nature Reserves.

Specific References