

B1. Ecological Value

B1.1 Introduction

Saltmarshes provide a wide range of functions and services, each of which provide some value. English Nature (2002) classifies these into four main groups:

- **Appreciation:** enjoyment of nature for health, spiritual enrichment, better living environment, cultural meaning and artistic inspiration;
- **Knowledge:** a resource for general education, scientific and historic discovery and environmental monitoring;
- **Products:** sustainably harvested products such as food, fuel, medicines and construction materials; and
- **Ecosystem services:** provision of basic life-supporting structures including the maintenance of air, soils and climate and the mitigation of flooding and pollution.

These main groups can be divided into 25 categories relevant to saltmarsh in England and Wales, as defined in Box B1.1.

Box B1.1: Definition of Saltmarsh Functions and Services		
Categories	Functions and Services	Definition
Appreciation	Living surroundings	Healthy environment, well-being from local walks and views, health benefits of access to natural areas
	Recreational resource	Day visits and tourism
	Distant appreciation	Nature in magazines, books, TV, etc.
	Cultural, spiritual and historic meanings	Folklore, sense of place, local distinctiveness, historic settings
	Artistic impression	Nature in poems, literature, music, visual arts, sculpture and marketing images
	Social development	Conservation volunteers, ecological surveys, skills for work, building community spirit
Knowledge	Scientific discovery	Medicine, genetics, forensic science, behavioural studies, etc.
	Historical analysis	Archaeological finds, evolution
	Environmental monitoring	Climate change, pollution monitoring, succession
	Educational resource	For school, college and university visits
	Natural science research	UK resources important for ecological and geological knowledge worldwide
Products	Food and drink	Organic meat and vegetables, sustainable fisheries, fruit, berries, natural drinks, etc.
	Fuel, fibre and construction	Thatch, coppice, charcoal, energy crops, etc.

Box B1.1: Definition of Saltmarsh Functions and Services		
Categories	Functions and Services	Definition
	Medicinal and cosmetic products	Plant and animal species providing cosmetic and medicinal products
	Ornamental and other products	Responsibly collected flowers, seeds, etc.
Ecosystem services	Global life- support systems	Atmosphere and climate regulation, carbon storage
	Flood and erosion control	Wave attenuation
	Water quality and quantity	Nutrient cycling, sediment retention
	Pollution control	Land preparation, physical health from pollution capture properties, noise and wind reduction
	Soil provision	Soil formation processes and soil erosion prevention
	Landscape formation	River and coastal geomorphological processes
	Waste decomposition and disposal	Micro-organism processes and scavenging
	Pollination	Crops and flowers
	Biological control	Pest reduction through predators
	Habitat provision	Spawning grounds for commercial fish, habitats for plants, animals, insects, etc.

<http://www.englishnature.gov.uk/pubs/publication/PDF/valueofnat.pdf>

B1.2 Relevant designations applied in recognition of the nature conservation and landscape value of saltmarsh

The various nature conservation designations which may apply to saltmarsh habitat and the ecological interests that it supports are briefly discussed below.

B1.2.1 UK conservation designations

In the UK, there are a range of statutory and non-statutory land designations, the presence of which can influence development and management in the coastal zone. It is not uncommon for a stretch of coast to be subject to more than one designation, with either concurrent or overlapping boundaries.

Sites of Special Scientific Interest

The UK Government has a duty to notify Sites of Special Scientific Interest (SSSI) under the requirements of the Wildlife and Countryside Act 1981 (amended 1985)¹ and given greater protected status under the Countryside and Rights of Way Act 2000¹ (CRoW). SSSIs are notified where, in the opinion of the Government, the land in question is of special interest due to any component of its flora, fauna or geology.

¹ www.jncc.gov.uk/legislation/default.htm

SSSIs are designated by English Nature², the Countryside Council for Wales³ (CCW), Scottish Natural Heritage⁴ (SNH) and the Department of the Environment, Northern Ireland⁵ (DoENI), known as designating bodies. In Northern Ireland, certain areas are alternatively designated as Areas of Special Scientific Interest⁶ (ASSI), under the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985. Although very similar, the designations do have important differences and the reader is advised to ensure they are fully aware of the implications of the designation where necessary.

SSSI is the major statutory designation used for wildlife protection in the UK. The designation gives the land certain protection against potentially damaging operations and requires the approval of the designating body before any works can take place within, or adjacent to the site boundary.

For further information on SSSIs, their protected status and implications for development and management proposals, the reader is referred to the website of the relevant nature conservation authority.

National Nature Reserves

National Nature Reserves⁷ (NNR) are areas of key wildlife habitat that are managed specifically for wildlife conservation purposes. This contrasts with the management of SSSIs where the primary land use is not necessarily conservation, but where management techniques and practices are agreed that are consistent with the ongoing conservation importance of the area.

Marine Nature Reserves

Marine Nature Reserves⁸ (MNRs) are created by statute (under the Wildlife and Countryside Act 1981) to conserve marine flora and fauna and geological or physiographical features of special interest, while providing opportunities for study of the systems involved. MNRs may be established within 3 nautical miles of the coast under the Territorial Seas Act 1987 or, by an Order in Council, to the limits of UK territorial waters; they include both the sea and the seabed. MNRs can be protected by bylaws.

UK Biosphere Reserves

Biosphere Reserves (BR) are areas of terrestrial and coastal/marine ecosystems which are internationally recognised under UNESCO's Man and the Biosphere⁹ (MAB) programme launched in 1971.

² www.english-nature.org.uk

³ www.ccw.gov.uk

⁴ www.snh.gov.uk

⁵ www.doeni.gov.uk

⁶ www.ehnsi.gov.uk/natural/designated/area_interest.shtml

⁷ www.english-nature.org.uk/speciallink.htm

⁸ www.defra.gov.uk/wildlife-countryside/ewd/ewd08.htm

⁹ www.unesco.org/mab

BRs are nominated by national governments, through the national MAB Committee¹⁰, and must meet a minimum set of criteria and adhere to a minimum set of conditions before being added to the network. Each reserve is identified to fulfill three complementary functions:

- A conservation function to preserve genetic resources, species, ecosystems and landscapes;
- A development function to foster sustainable economic and human developments; and
- A logistic support function to support demonstration projects, environmental education and training, research and monitoring related to issues of conservation and sustainable development.

There are currently 8 BRs in the UK. For further information the reader is referred to the UKMAB¹⁰ website.

Local Nature Reserves

Local Nature Reserves⁷ (LNR) are designated by local authorities in consultation with English Nature. Their basis for designation is similar to that of NNRs but the emphasis is on local rather than national interest.

Environmental Stewardship Schemes

Environmental Stewardship¹¹ (ES) was launched in England in March 2005 and replaced the existing agri-environment schemes (Environmentally Sensitive Areas, Countryside Stewardship and Organic Farming Schemes). It is a scheme which provides funding to farmers and other land managers in England who deliver effective environmental management on their land. In terms of saltmarsh, farmers can be paid for managing grazing levels to encourage increased bird usage and plant diversity. Another option open to landowners is realigning protected land to create intertidal habitat. Similar schemes also exist in Wales¹² and Scotland¹³.

UK Biodiversity Action Plan

DEFRA hosts a Biodiversity Secretariat¹⁴ to help support the implementation of the Convention of Biological Diversity¹⁵ in the UK. The Secretariat promotes the integration of Biodiversity into policies, projects and programmes within Government and beyond. It does this by using the conservation methods outlined in the UK Biodiversity Action Plan¹⁶ (UK BAP), UK Steering Group Report (volumes I and II), and the 391 Species Action Plans, 45 Habitat Action Plans and about 162 Local biodiversity Action Plans.

¹⁰ www.ukmab.org

¹¹ www.defra.gov.uk/erdp/schemes/es/default.htm

¹² www.ccw.gov.uk/generalinfo/index.cfm?Action=ResourceMore&ResourceID=26&Subject=Agriculture&lang=en

¹³ www.scotland.gov.uk/Topics/Agriculture/Environment/Agrienvironment

¹⁴ www.defra.gov.uk/wildlife-countryside/ewd/ewd07.htm

¹⁵ www.biodiv.org

¹⁶ www.ukbap.org.uk

Within the UK BAP, coastal saltmarsh is classified as a “priority habitat” associated with the broad habitat “littoral sediment” which encompasses saltmarsh, mudflats, seagrass beds and sheltered muddy gravels. The action plan is hosted at the UK BAP website and can be accessed at www.ukbap.org.uk/UKPlans.aspx?ID=33

B1.2.2 European conservation designations

International conventions and directives have a key role in the maintenance of species and habitats over a large geographical area. This is essential for migratory species where all habitats utilised over their annual cycle need to be maintained to safeguard their future.

Two major European Directives are in place to ensure that these habitats are protected; EC Directive (92/43/EEC)¹⁷ on the conservation of natural habitats and of wild flora and fauna (the Habitats Directive) and EC Directive (79/409/EEC) on the conservation of wild birds (the Birds Directive). These two directives allow for the creation of a network of protected sites across Europe, entitled Natura 2000. Natura 2000 will comprise Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) classified under the Birds Directive’.

Special Protection Areas (SPAs)

In the UK 237 SPAs have been classified covering over 1,250,000 hectares. There are 87 SPAs in England covering approximately 597,000 hectares. A full list of SPAs can be found on the JNCC website under protected sites at www.jncc.gov.uk/idt/default.htm.

A copy of the UK SPA Review, published in September 2001, can be viewed at www.jncc.gov.uk/ukspa/. The review provides a comprehensive review of the UK’s SPA Network, with information presented on a site by site, and species by species basis.

Special Areas of Conservation (SACs)

The Habitats Directive includes lists of 169 habitat types (Annex I habitats) and 623 species (Annex II species) for which Member States must consider designation of SACs. On the basis of current knowledge, 76 of the listed habitat types occur within the UK (excluding Gibraltar), and 40 species are known to occur (or to have occurred in recent times) as native populations within UK territory (again, excluding Gibraltar). The Habitats Directive is implemented in UK law through The Conservation (Natural Habitats &c) Regulations 1994, the text of which can be found on the website of Her Majesty’s Stationary Office¹⁸.

Sites proposed for selection are proposed by the statutory nature conservation agencies and coordinated through JNCC. Once sites have been identified, the names

¹⁷ <http://europa.eu.int/com/environment/nature/habdir.htm>

¹⁸ www.hmsso.gov.uk

of suitable sites are formally advised to Government at which stage they become known as possible Special Areas of Conservation (pSACs). Following a period of consultation with site owners/occupiers and other interested stakeholder, sites are submitted to the European Commission. At this stage sites become known as candidate Special Areas of Conservation (cSACs). Each Member State's national list is then evaluated by the European Commission to form a European network of Sites of Community Importance (SCIs). These will eventually be designated by the member states as Special Areas of Conservation (SACs). In the UK the first tranche of cSACs were submitted to the commission in 1995. In December 2004, over 600 cSACs covering a total area of 2.5 million hectares were established as SCIs by the commission. A full list including GIS maps, habitats and species accounts and reasons for selection can be viewed on the JNCC website¹⁹.

Saltmarshes play an important role in the Natura 2000 network, both as a component of large habitats such as estuaries and coasts, and also as a habitat in their own right. The term saltmarsh is broadly applied to 4 Annex I habitats these are:

- Salicornia and other annuals colonising mud and sand²⁰;
- Spartina swards¹⁵ (*Spartinion maritimae*);
- Atlantic salt meadows¹⁵ (*Glauco-Puccinellietalia maritimae*); and
- Mediterranean and thermo-Atlantic halophilous scrubs¹⁵ (*Sarcocornetea fruticosi*).

Following submission of the latest list of candidate SACs to the EC (Tranche 31 – 29th January 2004), there are 40 sites in which Annex I saltmarsh habitat is a primary reason for the site's designation.

Plans and Projects in SPAs and SACs

In considering proposals for plans and projects that may affect SPAs and SACs, the initial consideration is whether there is likely to be a significant impact on the site: this impact must be assessed in light of the sites nature conservation objectives and the future sustainability of the integrity of the site. The Competent Authority will make such an assessment and must consult English Nature. Permitted development may not be used if it is likely to have a significant effect on a European site unless the developer receives written approval from the LPA. Such proposals must be subject to an appropriate assessment; advice on this should be sought from English Nature for specific cases.

In the event that a proposed development is considered to adversely affect the integrity of a site, which mitigation measures cannot fully address, planning permission will not be granted except under the following circumstances. First, there are no alternative solutions. Secondly, that the site does not host a priority natural habitat type or species (as defined in Annexes I and II of the Habitats Directive). Thirdly, that the proposed development is necessary for imperative reasons of overriding public interest. Where a site does host a priority habitat or species and no alternative solutions are available, planning permission can only be granted on

¹⁹ www.jncc.gov.uk

²⁰ www.jncc.gov.uk/Publications/JNCC312/UK_habitat_list.asp

grounds of human health, public safety or if the development is environmentally beneficial. If the plan or project does not proceed under these circumstances, compensatory measures must be secured.

B1.2.3 International designations

The Ramsar Convention²¹, adopted in 1971 and ratified by the UK Parliament in 1976, has as its primary objective the conservation of wetland and wildfowl from progressive losses. Most of the UK Ramsar sites have been designated on the basis of regularly supporting significant populations of birds. The implementation of the Ramsar designation is, therefore, closely linked to that of SPAs. The Government in England and Wales has issued policy statements relating to the special status of Ramsar sites. This extends the same protection at a policy level to listed Ramsar sites in respect of new development as that afforded to sites which have been designated under the EC Birds and Habitats Directives as part of the EU Natura 2000 network.

B1.2.4 Landscape, amenity and heritage designations

In addition to the UK, European and International designations for conservation of wildlife interests, there are also further designations that apply to coasts and estuaries, for the protection of important landscapes and heritage features. Many of these designations overlap with those for wildlife conservation. The Countryside Agency²² has the responsibility for the designation of National Parks, Areas of Outstanding Natural Beauty (AONB) and Heritage Coast (CCW³ has this responsibility in Wales). There are also areas designated for their archaeological and cultural heritage value.

National Parks

There are twelve National Parks²³ in England and Wales, seven of which have coastal frontages. This includes the Broads, which was set up by a special Act of Parliament in 1988 and the New Forest, the designation of which was announced in June 2004, although a date for designation has not yet been set. There is an inquiry underway at the time of writing (2005) on the proposed South Downs National Park. Two National Parks have been established in Scotland, neither of which support saltmarsh vegetation. As yet, no National Parks have been established in Northern Ireland, although action is currently being taken to designate the Mountains of Mourne.

Areas of Outstanding Natural Beauty

AONBs²⁴ are designated for the primary purpose of conserving natural beauty. The other objectives of the designation are two fold namely, to:

²¹ www.ramsar.org

²² www.countryside.gov.uk

²³ www.cnp.org.uk

²⁴ www.aonb.org.uk

- Facilitate the use of the area for recreation in a manner consistent with the conservation of the area and other users; and
- Take into account the maintenance of local industries and the economic and social well-being of the area.

Heritage Coast

Heritage coasts¹⁷ are selected as the finest stretches of undeveloped coast that require comprehensive conservation and management to ensure their preservation. Heritage Coasts are designated by the same government bodies as for AONBs, in consultation with local authorities, and protected by development plans. Heritage Coasts are managed by local authorities and must have defined management plans.

National Trust Properties

The National Trust²⁵ (NT) is an independent charity, founded in 1895, with significant land holdings. In 1907, an Act of Parliament gave the NT strong powers to preserve and protect the nation's buildings and land. Thus, land owned by the NT is fully protected against development. At the end of 2004 the NT had acquired 415 miles (665 km) of coastline in England, Wales and Northern Ireland and also owned/managed 52,600 hectares of coastal hinterland.

Scheduled Ancient Monuments

Scheduled Ancient Monuments²⁶ (SAM) are the responsibility of English Heritage²⁷, CADW²⁸ (Wales), Historic Scotland²⁹, and the Environment and Heritage Service³⁰ of DoENI. These sites of archaeological and cultural heritage value are protected under the Ancient Monuments and Archaeological Areas Act 1979. There are around 35,000 SAMs in the UK, many of which are found in the coastal zone. Any works that may have an impact upon a SAM require 'scheduled monument consent' from the relevant competent authority. Consultation with the competent authority would be required prior to any works being carried out on a saltmarsh, regardless of their purpose.

B1.2.5 Other designations

It is possible for land in coastal areas to carry other designations to those given above. Many of these may be subject to protection under planning law, for example, Public Rights of Way.

²⁵ www.nationaltrust.org.uk

²⁶ www.culture.gov.uk/historic_environment/Scheduled_Ancient_Monuments.htm

²⁷ www.english-heritage.org.uk

²⁸ www.cadw.wales.gov.uk

²⁹ www.historic-scotland.gov.uk

³⁰ www.ehsni.gov.uk