

DEPARTMENT OF THE ENVIRONMENT FOR NORTHERN IRELAND

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT STRANGFORD LOUGH (PART 3), COUNTY DOWN. ARTICLE 24 OF THE NATURE CONSERVATION AND AMENITY LANDS (NORTHERN IRELAND) ORDER 1985.

The Department of the Environment for Northern Ireland (the Department), having consulted the Committee for Nature Conservation and being satisfied that the area delineated and described on the attached map (the area) is of special scientific interest by reason of the flora and fauna and accordingly needs to be specially protected, hereby declares the area to be an area of special scientific interest to be known as the "Strangford Lough (Part 3) area of special scientific interest".

Strangford Lough as a whole is one of the largest sea-loughs in Northern Ireland, and possesses a landscape of drowned drumlins and raised beach terraces which have been shaped by the Quaternary glaciation. The drumlins display various stages of wave erosion, with a number of them reduced to rocky islets and reefs, known locally as "pladdies". The intertidal zone covers approximately 50 km² and the diversity of the marine habitats is internationally renowned. The many different intertidal habitats are identifiable on the basis of substrate type and wave exposure with each one supporting a characteristic range of species; no comparable area in Northern Ireland has so wide a range of either habitats or species. There are a number of species of interest because they are near the northern (eg Diodora apertura (Keyhole Limpet), Elysia viridis (a sea slug), Cereus pedunculatus (Daisy Anemone)) or southern (eg Acmaea tessulata (Tortoise-shell Limpet), Leptasterias mulleri (a starfish)) extremes of their ranges. The richness of the marine flora and fauna can largely be attributed to physiographical features resulting in the immense tidal flow through The Narrows, the range and timing of the tidal variations in the Lough and the wide variety of substrates which occur. The lough as a whole represents a unique and extremely complex, integrated system.

The Strangford Lough (Part 3) area of special scientific interest is an integral part of Strangford Lough as a whole. It contains a great diversity of intertidal habitats, with The Dorn being an area of exceptional note.

Extensive areas of mudflat are found on both the east and west shores of Strangford Lough (Part 3). Around Yellow Rocks the mud is particularly soft, with very dense populations of Sabella pavonina (Peacock Worm) and Mya arenaria (Sand Gaper). The mudflats in the sheltered areas around Black Neb have large concentrations of Zostera noltii (Dwarf Eelgrass); mixed stands of Z. noltii and Zostera angustifolia (Narrow-leaved Eelgrass) are found at Yellow Rock, in Quarterland Bay and as particularly dense stands between Castle Espie and Mahee Island. The mudflats are rich in invertebrate fauna; the principal components of the community consisting of the amphipod Corophium volutator, the polychaete worms Arenicola marina (Lugworm) and Nereis diversicolor (Ragworm) and the molluscs Macoma balthica (Baltic Tellin), Cerastoderma edule (Edible Cockle), Mya arenaria (Sand Gaper) and Mya truncata (Blunt Gaper). These mudflats provide important feeding grounds for large numbers of wading birds and wildfowl.

The fauna of the upper shore around Saltwater Bridge and Ardmillan Bay reflect a degree of estuarine influence, with the flat-worm Procerodes ulvae and the isopod Jaera albifrons being common under stones. This type of habitat, with freshwater influence, is rare within Strangford Lough.

Y88041/CWB

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT STRANGFORD LOUGH (PART 3), COUNTY DOWN. ARTICLE 24 OF THE NATURE CONSERVATION AND AMENITY LANDS (NORTHERN IRELAND) ORDER 1985.

The under-boulder and cobble fauna in Strangford Lough (Part 3) is particularly well represented at a number of sites where the boulder zone extends to extreme low-water spring tide mark. In Kircubbin Bay, luxuriant growths of Ascophyllum nodosum (Knotted Wrack), Fucus serratus (Saw Wrack) and Dictyota dichotoma cover the boulders, which are embedded in a mixture of gravel, sand and mud. Living under the boulders are the polychaetes Amphitrite johnstoni and Eupolyornia nebulosa (Strawberry Worm), which build loosely adhering sand-tubes. The diversity of chitons (a group of ancient molluscs with eight overlapping shells) found in the littoral zone at Kircubbin Bay is exceptional; very high densities of Acanthochitona crinitus are found, together with unusually high numbers of Tonicella rubra, Callochiton achatinus, Leptochiton asellus and Tonicella marmorea (Red-marbled Chiton), which is normally only found sub-littorally. Many of the stones also have unusually large numbers of Anomia ephippium (Common Saddle Oyster) on them. Encrusting animals are abundant on the boulders on the shores around Horse Island (east coast), Bradock Island, Simmy Island, Shamrock Island and Darragh Island. The area around Horse Island is swept by unusually strong currents and here the Fucus serratus supports an extremely rich epifauna and the boulders are covered by many species of tunicate (sea-squirt), including Botryllus schlosseri (Star Ascidian) and Botrylloides leachii. The areas around Simmy Island, Shamrock Island and Castle Island are characterised by boulders, interspersed by patches of mud and sand; this varied habitat supports many species of sponge including Halichondria panicea (Breadcrumb Sponge), Hymeniacidon perleve, Hymeniacidon sanguinea and Myxilla incrustans. The boulders around Simmy Island have large numbers of the barnacle Balanus crenatus, which is typically a sub-littoral species. The shore around Castle Island is the only known site in Strangford Lough where Gibbula magus (a top shell) can be found above low water mark.

A great diversity of shore types occurs within the short distance between Ballywadden Bay and Ladys Port, ranging from coarse sand, through gravel and sand, to boulders and bedrock. Near the top of the shore in Ballywadden Bay there is a very large area of Lichina pygmaea (a short, tufted, black lichen) which is unusual both in terms of its extent and in its occurrence in such a sheltered site. The lower shore boulder areas have a rich flora, with often dense stands of Chondrus crispus (Irish Moss) and extensive areas carpeted with Audouinella sp. (a short, tufted, red alga) which supports a very rich annelid epifauna. The bedrock headland north of Ladys Port has a classical algal zonation pattern, which is an uncommon feature in Strangford Lough. The gravelly-sandy areas dispersed along this stretch of coastline have a number of species of particular note, including the burrowing sea-anemone Edwardsiella carnea, and a burrowing sea-cucumber Leptosynapta inhaerens (Worm-cucumber), which are both normally restricted to the sub-littoral region. Sipunculus nudus, a member of the unusual Phylum Sipunculoidea, is found living in the sand from around mid-tide level downwards, and Ensis siliqua (Pod Razor Shell) is found in the cleaner sand at extreme low-water spring tide levels.

The Dorn is an area of Strangford Lough which is unique both in its hydrological dynamics and in the diversity of its flora and fauna. The Dorn is exceptionally sheltered from wave action and the tidal movement is restricted by a number of rock sills. The duration of 'effective' low water lasts for nearly 3 hours, as compared with the normal 30 minutes elsewhere in Strangford Lough. Areas of reduced salinity, due to the freshwater input of a number of small streams, have flourishing brackish water species communities. In the region of the sills, a combination of rapid water flow, permanent water cover and a good detrital food supply results in a rich low-shore and shallow sub-littoral fauna.

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT STRANGFORD LOUGH (PART 3), COUNTY DOWN. ARTICLE 24 OF THE NATURE CONSERVATION AND AMENITY LANDS (NORTHERN IRELAND) ORDER 1985.

In the area of The Dorn rapids, abundant growths of sea-anemones, sponges and sea-squirts are found. On the rocky substrate, Sagittia sp., Tealia felina (Dahlia Anemone) and Anemonia sulcata (Snake-locks Anemone) are abundant, and on the muddy substrate below the rapids area are carpets of Cereus pedunculatus (Daisy Anemone). Sponges present in the rapids include Ophiltaspongia seriata, Myxilla incrustans, Hymeniacidon sanguinea and Leucosolenia botryoides. The sponges Halichondria panicea (Breadcrumb Sponge), Sycon ciliatum and Grantia compressa (Purse Sponge) are also present, and are unusually conspicuous by growing to abnormally large sizes. Adocia cinerea is rare elsewhere in Strangford Lough but particularly abundant in the rapids. A number of normally relatively deep sub-littoral animals are found in the area of the rapids, including Antedon bifida (Feather Star), Solaster endeca (Purple Sunstar), Ocenebra erinacea (Sting Winkle) and Pecten maximus (Great Scallop).

The main trough of The Dorn supports a dense forest of Laminaria saccharina (Poor Man's Weather Glass) and Halidrys siliquosa (Sea Oak). The gravelly-sand bottom has unusually dense colonies of Sabella pavonina (Peacock Worm) and Mya arenaria (Sand Gaper) and occasional Ostrea edulis (Edible Oyster) and Pecten maximus (Great Scallop).

Within Strangford Lough (Part 3) there are a number of important saltmarshes at the uppermost limit of the intertidal zone. These contain a characteristic assemblage of saltmarsh plants including Salicornia spp. (Glasswort), Puccinellia maritima (Common Saltmarsh Grass), Armeria maritima (Sea Pink) and Aster tripolium (Sea Aster). The most extensive areas of saltmarsh are along the southern shores of the Comber Estuary, at Saltwater Bridge and at the innermost region of The Dorn. In places, notably from Doctors' Bay to the south of Gransha Point, a complex topography of rocky headlands and muddy inlets forms a mosaic of inter-related habitats. These grade from saltmarsh to freshwater fen, maritime heath and scrub. Similar transitions exist at other localities within Strangford Lough (Part 3) and contribute to the diversity of both habitats and species. A considerable number of uncommon vascular plants occur in the area, ranging from plants of intertidal mudflats (eg Zostera noltii, Eelgrass), to species of saltmarsh (eg Halimione portulacoides, Sea Purslane), brackish water (eg Eleocharis uniglumis, Spike-rush) and freshwater (eg Hypericum elodes, Marsh St Johns' Wort). Terrestrial species reflecting maritime influences are also found (eg Scilla verna, Spring Squill and Sagina maritima, Sea Pearlwort). The smaller islands in the area have not been intensively farmed and contain examples of unimproved neutral grassland, scrub and woodland. In addition to their botanical interest, these areas provide undisturbed habitats for wildlife, and are particularly valuable as feeding, roosting and nesting sites for large numbers of bird species.

Strangford Lough provides very important over wintering feeding grounds for large numbers of duck and goose species, including Anas penelope (Wigeon), Tadorna tadorna (Shelduck) and Branta bernicla hrota (Pale-bellied Brent Goose). The numbers of Pale-bellied Brent Geese are of international importance with up to 40% of the world population arriving in early winter at the northern end of the lough. The mudflats on the south side of the Comber Estuary are one of the most important sources of Zostera (Eelgrass) for the Geese. The small bays, particularly on the west shore of the lough are important in late winter, as the flocks gradually move south and disperse to various sites around the lough and in Ireland.

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT STRANGFORD LOUGH (PART 3), COUNTY DOWN. ARTICLE 24 OF THE NATURE CONSERVATION AND AMENITY LANDS (NORTHERN IRELAND) ORDER 1985.

The many muddy and sandy shores provide excellent feeding grounds for large flocks of waders. In particular, significant numbers of Haematopus ostralegus (Oystercatcher), Vanellus vanellus (Lapwing), Pluvialis apricaria (Golden Plover), Numenius arquata (Curlew), Tringa totanus (Redshank), Calidris alpina (Dunlin) and Calidris canutus (Knot), frequent the shores and are an integral part of the total ecosystem.

Important breeding colonies of Phalacrocorax carbo (Cormorant) within Strangford Lough are found on Bird Island and Black Rock (Ringdufferin).

Strangford Lough is the most important breeding site in Ireland for Phoca vitulina (Common Seal). Approximately 30% of the total adult population of the lough is found in colonies on a number of small islands and pladdies, namely Far and Near Craiglees, Yellow Rocks and Castle Hill Rocks on the east shore and Green Island and Dunsey Rocks on the west. In 1987, 42% of the total pups reared were from these colonies.

SCHEDULE

The following operations and activities appear to the Department to be likely to damage the flora and fauna of the area and require prior notification to and permission from the Department:-

- Cultivation, including ploughing, rotovating, harrowing or re-seeding.
- Changes in the grazing regime, including changes in type of livestock or significant increase or decrease in livestock population, or changes in the seasonal pattern of grazing or cessation of grazing.
- Changes in livestock feeding practice.
- Changes in the mowing or cutting regime, including changes from hay making to silage cutting, or cessation of mowing.
- Application of manure, slurry, fertilisers or lime.
- Application of pesticides, herbicides, fungicides or other chemicals deployed to kill, selectively or non-selectively, any form of animal, plant or other living organism.
- Dumping, spreading or discharge of any matter.
- Burning.
- The release into the area of any wild, feral or domestic animal, plant or seed. "Animal" includes any mammal, reptile, amphibian, bird, fish or invertebrate but does not include livestock.
- The destruction, displacement, removal or cutting of any plant, seed or plant remains.

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT STRANGFORD LOUGH (PART 3), COUNTY DOWN. ARTICLE 24 OF THE NATURE CONSERVATION AND AMENITY LANDS (NORTHERN IRELAND) ORDER 1985

- Changes in tree or woodland management (including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition).
- Drainage, including the use of mole, tile, tunnel or other artificial drains.
- Modification of the structure of water courses (for example, rivers, burns, springs, ditches, drains), including their banks and beds such as by realignment, regrading or dredging.
- Management of aquatic or bank vegetation.
- The alteration of water levels or water tables or utilisation of water (including storage or abstraction).
- Infilling of ditches, drains, ponds, pools, marshes or pits.
- Changes in coastal fishing practice, and changes in fisheries management and changes in the use of traps or fish cages.
- Collection of sea food or marine organisms.
- Reclamation of land from sea, estuary, marsh, lake or river.
- Bait digging in intertidal areas.
- Erection of sea defences or coast protection works including cliff or landslip drainage or stabilisation measures.
- Extraction of minerals including shingle, sand, gravel, topsoil, sub-soil or shells.
- Construction, removal or destruction of roads, tracks, walls, fences, hard-standings, banks, ditches or other earthworks or the laying, maintenance or removal of pipelines or cables, above or below ground.
- Storage of materials.
- Erection of permanent or temporary structures or the undertaking of building, engineering or other operations, including drilling, or the formation of access roads.
- Alteration or modification of natural or man-made features, (including clearance of boulders, large stones, loose rock or scree, infilling of pits or quarries).

Y88041/CWB

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT STRANGFORD LOUGH (PART 3),
COUNTY DOWN. ARTICLE 24 OF THE NATURE CONSERVATION AND AMENITY LANDS (NORTHERN
IRELAND) ORDER 1985.

- Use of vehicles or craft likely to damage or disturb the wildlife.
- Recreational, educational or research activities likely to damage the wildlife.
- Changes in game or waterfowl management or hunting practices.
- Exercising of animals in areas where they are likely to disturb or damage the wildlife.

Sealed with the Official Seal of
the Department of the Environment for
Northern Ireland on 21 April, 1989



J C L PHILLIPS
Assistant Secretary

Lisa Cochrane
Civil Servant
Both of Stormont
Belfast.