

## DEPARTMENT OF THE ENVIRONMENT

### DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT KILLOUGH BAY AND STRAND LOUGH, COUNTY DOWN. ARTICLE 24 OF THE NATURE CONSERVATION AND AMENITY LANDS (NORTHERN IRELAND) ORDER 1985.

The Department of the Environment (the Department), having consulted the Council for Nature Conservation and the Countryside and being satisfied that the area described and delineated 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 'Killough Bay and Strand Lough Area of Special Scientific Interest'.

The area supports important inter-tidal communities, with both sheltered and moderately exposed sediment shores, as well as a rocky shore dominated by boulders. Inter-tidal mudflats, well represented within the area, are a Northern Ireland Biodiversity priority habitat.

Killough Harbour is a sheltered, mixed substrate, sediment shore. The invertebrate fauna is notably rich. The most common burrowing bivalves are Baltic Tellin *Macoma balthica*, Peppery Furrow Shell *Scrobicularia plana* and Common Cockle *Cerastoderma edule*. The polychaete worms *Scoloplos armiger* and Lugworm *Arenicola marina* are frequent as is the burrowing amphipod *Corophium volutator*. The green seaweed *Enteromorpha* spp. is widespread throughout much of the harbour.

Sections of Coney Island Bay are an important example of a moderately exposed sediment shore. The most common of the polychaete worms are Rag Worm *Nereis diversicolor* and Lugworm *Arenicola marina*. The burrowing amphipods *Pontocrates altamarinu* and *Bathyporeia* spp. are widespread in the clean sand of the lower shore, while Sand-hopper *Talitrus saltator* occurs in the decomposing seaweed on the strand-line.

Much of the rest of the bay hosts a generally sheltered rocky shore, dominated by boulders. A notable species is the polychaete worm *Sabellaria alveolata*, here at its northern limit. Numerous other invertebrates occur within this species-rich area but overall it is dominated by Acorn Barnacle *Semibalanus balanoides*. The most frequent gastropods include the Topshells *Gibbula cineria* and *G. umbilicalis*, the Dog

Whelk *Nucella lapillus* and the Periwinkles *Littorina* spp. Seaweeds are particularly diverse and include the shore species Channelled Wrack *Pelvetia canaliculata*, Toothed Wrack *Fucus serratus*, Spiral Wrack *F. spiralis* and Knotted Wrack *Ascophyllum nodosum*. The red seaweed *Corallina officinalis* and the green seaweeds *Enteromorpha* spp. and *Cladophora* spp. occur in rockpools.

Much of the Killough Bay shoreline supports a complex mosaic of annual driftline and cobble beach communities, interspersed with areas of saltmarsh, rock outcrop and occasional low cliffs.

The driftline community typically occurs on semi-stable upper beach areas where it is often subject to winter erosion, only to re-establish itself during calmer summer weather. The dominant species include Spear-leaved Orache *Atriplex prostrata* and Cleavers *Galium aparine*. The cobble beach offers a more stable substrate and supports a wider range of species. These include Perennial Sow-thistle *Sonchus arvensis*, Sea Beet *Beta vulgaris* ssp. *maritimus*, Silverweed *Potentilla anserina*, Sea Mayweed *Tripleurospermum maritimum* and Sea Radish *Raphanus raphanistrum* ssp. *maritimus*. Occasionally, sheets of sand are present along the upper beach, supporting Sand Couch *Elytrigia juncea*.

Small areas of saltmarsh are present in sheltered embayments and on stable peaty-muds, often within beach sections otherwise dominated by cobble. These typically include Sea Club-rush *Bolboschoenus maritimus*, Sea Rush *Juncus maritimus*, Saltmarsh Rush *Juncus gerardii*, Sea Arrowgrass *Triglochin maritima*, Sea-milkwort *Glaux maritima* and Sea Aster *Aster tripolium*. In some places, sheltered muds occur in front of the species-rich saltmarsh. Here it is often dominated by Sea-purslane *Atriplex portulacoides*, Reflexed Saltmarsh-grass *Puccinellia distans* or Annual Sea-blite *Suaeda maritima*, although these are also present throughout the saltmarsh, but more sparsely.

Rocky shores are present in Coney Island Bay. These typically support a sparse cover of Sea Champion *Silene uniflora*, Thrift *Armeria maritima* and Sea Plantain *Plantago maritima*. Where thin soils are present, a more diverse species-rich maritime grassland community occurs. Typical species include Sea Champion *S. uniflora*, Sea Bindweed *Calystegia soldanella*, Common Bird's-foot-trefoil *Lotus corniculatus*, Burnet Rose *Rosa pimpinellifolia*, Lady's Bedstraw *Galium verum*, Wild Carrot *Daucus carota* ssp. *carota*, Thrift *A. maritima*, Wild Thyme *Thymus polytrichus*, Kidney Vetch *Anthyllis vulneraria* and Red Fescue *Festuca rubra*. Grassland on deeper soils tends to be less diverse and is typically dominated by False Oat-grass *Arrhenatherum elatius* with Hogweed *Heracleum sphondylium*, Sea Radish *Raphanus raphanistrum* ssp. *maritimus*, White Clover *Trifolium repens* and Red Fescue *F. rubra*.

Small stands of maritime heath are present and are dominated by Heather *Calluna vulgaris* and Red Fescue *Festuca rubra*, with some wetter sections supporting Devil's-bit Scabious *Succisa pratensis*.

The steeper clay cliffs around Coney Island Bay are characterised by species poor grassland with Red Fescue *Festuca rubra* and False Oat-grass *Arrhenatherum elatius*

dominating. Wind-dwarfed scrub comprising Gorse *Ulex europaeus*, Bramble *Rubus fruticosus*, Blackthorn *Prunus spinosa* and Ivy *Hedera helix* is also present.

Brackish waterbodies are rare in Northern Ireland; Strand Lough is the most natural example. The open water supports Tasselweed *Ruppia* spp. and Fennel Pondweed *Potamogeton pectinatus*. The fringing emergent vegetation is variable in extent and composition and consists of an outer but fragmentary fringe of Sea Club-rush *Bolboschoenus maritimus* or Grey Club-rush *Schoenoplectus tabernaemontani*. This gives way to Common Reed *Phragmites australis* swamp, which extends back to the south-west forming an extensive reed bed. Behind the swamp and reed bed there are small, localised stands of Greater Pond-sedge *Carex riparia* swamp as well as Sea Club-rush *B. maritimus* and Grey Club-rush *S. tabernaemontani*. Where the foreshore is shallow and there is seasonal inundation, the swamp gives way to a saltmarsh zone in which Silverweed *Potentilla anserina*, Sea Arrowgrass *Triglochin maritima*, Sea-milkwort *Glaux maritima*, Creeping Bent *Agrostis stolonifera*, Saltmarsh Rush *Juncus gerardii* and Slender Spike-rush *Eleocharis uniglumis* are all co-dominant components. Where the foreshore is much steeper, a narrow band of Reed Canary-grass *Phalaris arundinacea* tall herb fen backs the swamp.

The open water of the two disused brick pits included in the northern section of the area are deep and support extensive beds of Fennel Pondweed *Potamogeton pectinatus* along with smaller stands of Mare's-tail *Hippuris vulgaris* and Spiked Water-milfoil *Myriophyllum spicatum*. The emergent vegetation along the steep water margin consists of stands of Bulrush *Typha latifolia*, Water Horsetail *Equisetum fluviatile* and Common Spike-rush *Eleocharis palustris* swamp backed by a broader Common Reed *Phragmites australis* reed-bed, which in turn gives way to Reed Canary-grass *Phalaris arundinacea* tall herb fen.

The grasslands at Killough Bay and Strand Lough are complex and largely reflect the hydrological characteristics of the area. Wet grasslands predominate and these form natural transitions from the swamp and fen communities around the edge of Strand Lough. Dry grasslands are, in contrast, rather localised. These occur in small patches, often associated with old earth banks or along the coastal stretch.

The wet grasslands are variable, reflecting both natural variations in soil and topography and the effects of land management. Most of the field units are known to have traditionally flooded during winter months and many still do, albeit for shorter periods of time. Species richness or botanical diversity varies across the site, but is best in fields where there is no recent history of ploughing, where nutrient applications are low and where grazing levels are maintained at moderate levels. Relatively short swards have developed in such locations. These are dominated by species such as Creeping Bent *Agrostis stolonifera*, Crested Dog's-tail *Cynosurus cristatus*, the sedges *Carex flacca*, *C. nigra* and *C. panicea* and a range of herbs typical of damper soil conditions, such as Marsh Pennywort *Hydrocotyle vulgaris*, Selfheal *Prunella vulgaris*, Lesser Spearwort *Ranunculus flammula* and Silverweed *Potentilla anserina*. Locally in some fields, and more extensively in others, are areas dominated by Yellow Iris *Iris pseudacorus*. Greater Pond-sedge *Carex riparia* is notably a co-dominant here with a range of other taller grassland species, including

Brown Sedge *Carex disticha*, Hoary Willowherb *Epilobium parviflorum* and Meadowsweet *Filipendula ulmaria*.

Some fields in the west of the area support a grassland type known as fen meadow or rush pasture. These grasslands are typically rush-dominant with Sharp-flowered Rush *Juncus acutiflorus*, Soft Rush *J. effusus* and Compact Rush *J. conglomeratus* all present in varying proportions. Other species typical of this vegetation type are Purple Moor-grass *Molinia caerulea*, Common Yellow Sedge *Carex viridula* ssp. *oedocarpa*, Marsh Ragwort *Senecio aquaticus* and Tormentil *Potentilla erecta*, with Black Bog-rush *Schoenus nigricans*, Tawny Sedge *Carex hostiana* and Bog Pimpernel *Anagallis tenella* present where the soil conditions are wetter. Locally these swards are very species-rich, with plants such as Devil's-bit Scabious *Succisa pratensis*, Heath-grass *Danthonia decumbens* and Flea Sedge *Carex pulicaris* present.

Strand Lough also hosts an important invertebrate fauna, including a number of rare species adapted to the brackish water conditions. These include the beetles *Ochthebius marinus* that only occurs at Strand Lough and one other site in Northern Ireland, *Haliplus apicalis* which has its only Irish site here and *Cercyon tristis* which is rare in Northern Ireland. A number of snail species are also noteworthy including *Hippeutis complanatus*, *Planorbis planorbis* and *Gyraulus laevis*.

The inter-tidal area itself is dominated by sand, silt and mud together with scattered boulders. As noted, rich mats of the green seaweed *Enteromorpha* spp. are present, especially in Killough Harbour, that in turn attract internationally important numbers of wintering Light-bellied Brent Goose *Branta bernicla hrota*. On average, some 354 birds, 1.8% of the world population, spend the late winter and spring here, feeding on the green seaweed. Killough Bay plays an important role in supporting this species, as it is one of the most significant sites providing food and a refuge once the main wintering flock from Strangford Lough disperses due to lack of food.

## SCHEDULE

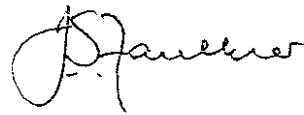
The following operations and activities appear to the Department to be likely to damage the flora and fauna of the area:

1. Any activity or operation which involves the damage or disturbance by any means of the surface and subsurface of the land, including ploughing, rotovating, harrowing, reclamation and extraction of minerals, including rock, sand, gravel and peat.
2. Any change in the present annual pattern and intensity of grazing, including any change in the type of livestock used or in supplementary feeding practice.
3. Any change in the established method or frequency of rolling, mowing or cutting.

4. Any change in the annual pattern of application of manure, slurry, artificial fertiliser or lime.
5. The application of herbicides, fungicides or other chemicals deployed to kill any form of wild plant, other than plants listed as being noxious in the Noxious Weeds (Northern Ireland) Order 1977.
6. The storage or dumping, spreading or discharge of any material not specified under paragraphs 4 or 5 above.
7. The destruction, displacement, removal or cutting of any plant, seed or plant remains, other than for
  - (i) plants listed as being noxious in the Noxious Weeds (Northern Ireland) Order 1977;
  - (ii) normal cutting or mowing regimes for which a consent is not required under paragraph 3 above.
8. The release into the area of any animal (other than in connection with normal grazing practice) or plant. 'Animal' includes birds, mammals, fish, reptiles, amphibians and invertebrates; 'Plant' includes seed, fruit or spore.
9. Burning
10. Changes in tree or woodland management, including afforestation, planting, clearing, selective felling and coppicing.
11. Construction, removal or disturbance of any permanent or temporary structure including building, engineering or other operations.
12. Alteration of natural or man-made features, the clearance of boulders or stones and grading of rock faces.
13. Operations or activities which would affect wetlands (including rivers, streams and open water), e.g.
  - (i) change in the methods or frequency of routine drainage maintenance;
  - (ii) modification of the structure of any watercourse;
  - (iii) lowering of the water-table, permanently or temporarily;
  - (iv) change in the management of bank-side vegetation;
  - (v) changes in field drainage.

14. The killing or taking of any animal in a manner likely to affect the continued existence of the species within the area except as provided for under the terms of the Wildlife (Northern Ireland) Order 1985.
15. The following activities undertaken in a manner likely to damage the scientific interest of the area:
  - (i) educational activities;
  - (ii) research activities;
  - (iii) recreational activities;
  - (iv) exercising of animals.
16. Changes in game, waterfowl, or fisheries management or fishing or hunting practices.
17. Use of vehicles or craft likely to damage the scientific interest of the area.

The Official Seal of the  
Department of the Environment  
hereunto affixed is authenticated  
by



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DR J S FAULKNER  
Senior Officer of the  
Department of the Environment

Dated the 14 of DECEMBER 2001

#### FOOTNOTES

(a) Please note that consent by the Department to any of the operations or activities listed in the Schedule does not constitute planning permission. Where required, planning permission must be applied for in the usual manner to the Department under Part IV of the Planning (Northern Ireland) Order 1991. Operations or activities covered by planning permission are not normally covered in the list of Notifiable Operations.

(b) Also note that many of the operations and activities listed in the Schedule are capable of being carried out either on a large scale or in a very small way. While it is impossible to define exactly what is "large" and what is "small", the Department would intend to approach each case in a common sense and practical way. It is very

unlikely that small scale operations would give rise for concern and if this was the case the Department would normally give consent, particularly if there is a long history of the operation being undertaken in that precise location.

