

Appendix 3a Site Synopsis

SITE SYNOPSIS

SITE NAME : BALLYTEIGE BURROW

SITE CODE : 000696

This coastal site extends eastwards and northwards from the village of Kilmore Quay in County Wexford. A long, narrow spit of coarse sand and gravel with an impressive sand dune system (Ballyteige Burrow) forms most of the seaward boundary of this site. Behind the spit lies a shallow, tidal sea inlet and estuary of the Duncormick River (The Cull). The eastern portion of this inter-tidal system was reclaimed in the 19th century by construction of the Cull Bank and is now polderland, most of which is intensively farmed grassland and arable land. The western portion of The Cull retains semi-natural habitat including mudflats which are exposed at low tide, and saltmarsh. The site contains several coastal habitats listed on Annex I of the E.U. Habitats Directive, including three priority habitats: fixed dune, dune heath and lagoon. Most of the site is designated a Nature Reserve.

A dominating feature of this site is its large dune system, many of the dunes reaching over 20m high. Embryonic shifting dunes and Marram dunes occur along the seaward side with more stable fixed dunes and dune heath inland, though blow-outs occur throughout. Typically, plants such as Marram (*Ammophila arenaria*), Portland Spurge (*Euphorbia portlandica*), Sea-holly (*Eryngium maritimum*), Sea Stork's-bill (*Erodium cicutarium*) and Carline Thistle (*Carlina vulgaris*) are common on the seaward dunes.

The fixed dunes occupy the central ridge of the Burrow. These are well developed and species-rich. The vegetation is predominantly low-growing and contains species such as Common Restharrow (*Ononis repens*), Wild Pansy (*Viola tricolor* subsp. *curtisii*), Sea Stork's-bill, Common Centaury (*Centaureum erythraea*), Wild Thyme (*Thymus praecox*) and Red Fescue (*Festuca rubra*). Cattle have not grazed the eastern end of the site since 1987 and, as a result, there is an increase in dune scrub encroachment and a decrease in species diversity. The dominant species here are Red Fescue and Burnet Rose (*Rosa pimpinellifolia*), while Bracken (*Pteridium aquilinum*) is common.

One of the most notable features at Ballyteige is the presence of developing acid heath within the (calcareous) fixed grey dune area. This is very unusual in Irish dune systems. The vegetation here is dominated by Bracken, with some Gorse (*Ulex europaeus*) and low-growing herbs. In addition, along with the classical foredune/fixed grey dune sequence, there are some unusual incipient slack/blowout complexes. These are eroded down in places to the shingle base on which the dunes rest.

Saltmarsh vegetation fringes The Cull, featuring Sea Aster (*Aster tripolium*), Sea Arrowgrass (*Triglochin maritima*), Sea Lavender (*Limonium humile*) and Hard-grass (*Parapholis strigosa*), with well-developed mats of Glasswort (*Salicornia* sp.) and

patches of Cord-grass (*Spartina* sp.). Salt meadows with Sea Rush (*Juncus maritimus*) have formed behind the dyke at the eastern end of the site. Part of the saltmarsh complex contains halophilous scrub vegetation. This is a very rare habitat in Ireland, with only two known extant locations - Ballyteige and Bannow Bay. This habitat is characterised by the rare Perennial Glasswort (*Arthrocnemum perenne*).

A series of drainage channels and a small pond, which are largely artificial in origin, now have a flora and fauna characteristic of lagoons. The channels have a maximum depth of 3 m. Seawater enters mainly by percolation through the dunes along the southern shore and apparently by leakage of the sluice on the Cull at high tide. While the aquatic vegetation in much of the site is poor, two lagoonal specialists, Tassel-weed (*Ruppia maritima*) and the green alga *Chaetomorpha linum*, occur. An additional lagoonal specialist, the Red Data Book charophyte *Chara canescens*, was recorded here as recently as 1991. The fauna of the lagoonal habitat is rich, diverse and typically lagoonal. A total of 60 taxa were recorded in a survey in 1998, in addition to several further taxa recorded previously. Eleven of these are considered as lagoonal specialists in Britain or Ireland (*Lekanesphaera hookeri*, *Palaemonetes varians*, *Sigara stagnalis*, *Sigara concinna*, *Agabus conspersus*, *Enochrus bicolor*, *Hydrobia ventrosa*, *Conopeum seurati*, *Neomysis integer*, *Notonecta viridis*, *Plea leachi*). While the habitat is particularly degraded, restoration is considered easy and long-term prospects are good.

This site is host to a range of rare plant species. Wild Asparagus (*Asparagus officinalis*) is frequent among dune vegetation, while Lesser Centaury (*Centaureum pulchellum*) is associated with damp dune slacks. Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Perennial Glasswort (*Arthrocnemum perenne*) occur on the saltmarsh. There is also a recent record for Sea Pea (*Lathyrus japonicus*). All five species are protected under the Flora (Protection) Order 1999. Henbane (*Hyoscyamus niger*), a species which is considered as threatened in Ireland, also occurs at Ballyteige. The dunes here also have an interesting lichen flora: the scarce species *Usnea articulata* occurs here, and this is the only known site in Ireland for another lichen, *Fulgensia fulgens*.

The Cull and adjacent reclaimed land provide important habitat for wintering waterfowl and Brent Goose occur here in internationally important numbers (average maximum count of 219 individuals over the winters 1994/95 - 1997-98). Nationally important numbers of Lapwing (2737) and Black-tailed Godwit (161) occur. Two species listed on Annex I of the Birds Directive occur regularly in winter, Golden Plover (2441) and Bar-tailed Godwit (79), while another species, Little Tern, breeds at Callenstown strand.

The invertebrate fauna of the site includes a number of scarce species, examples being the bumble bees *Bombus distinguendus* and *B. sylvarum*, the jewel wasp *Hedychridium ardens* and the ant *Tetramorium caespitum*.

The dune system is used for cattle grazing. The appropriate grazing level is a critical factor in maintaining the diversity of dune systems. Coastal systems in general are threatened by disturbance of the substrate, removal of sand/shingle, etc.

This coastal site is of major ecological value for its range of good quality coastal habitats, including three habitats given priority status on Annex I of the EU Habitats Directive - fixed dune, dune heath and lagoon. The dune system is of excellent quality, physically well-developed and with a rich flora which includes five protected species. The importance of the site for wintering waterfowl further enhances its value.

20.3.2003

SITE SYNOPSIS

SITE NAME: BANNOW BAY

SITE CODE: 000697

Bannow Bay is a relatively large estuarine site, approximately 14 km long, on the south coast of Co. Wexford. Small rivers and streams to the north and south-west flow into the bay and their sub-estuaries from part of the site. The bay contains large areas of mud and sand and the underlying geology is mainly of Ordovician slates with the exception of the areas to the east of Bannow Island which are underlain by Cambrian slates.

Eleven coastal habitats listed on Annex I of the E.U. Habitats Directive occur within the site. The estuary, including the saltmarshes, makes up approximately 83% of the site. At low tide up to 75% of the substrate is exposed. There are mud flats in the narrow northern part and also in the south-west and south-east. The sediments of the inner estuary associated with the Corock and Owenduff Rivers are generally black anoxic mud with some fine sand and broken shell. Mats of green algae (*Enteromorpha* spp.) are present and seaweeds (*Fucus* spp.) have colonised stony substrates, particularly further south.

Salt marshes of exceptional species diversity and rarity are found above the sand and mudflats, particularly at the south of the site. Habitats associated with *Spartina* sp. and *Salicornia* spp. occur in the salt marsh and on its fringes. A diverse range of *Salicornia* spp. has been recorded including *Salicornia pusilla*, *S. ramosissima*, *S. europaea*, *S. fragilis* and *S. dolichostachya*. Narrow shingle beaches up to 30 m wide occur in places along the edge of the estuary. The fringing reed communities are mainly confined to the tributaries and are relatively small in extent. They support Sea Club-rush (*Scirpus maritimus*), Grey Club-rush (*S. tabernaemontani*), Hemlock Water-dropwort (*Oenanthe crocata*) and abundant Common Reed (*Phragmites australis*).

The main areas of saltmarsh are on the islands at Clonmines; at the mouth of the tributary at Clonmines; at the mouth of the tributary at Taulaght; close to Saint Kieran's House; at the north-west of Big Burrow; at the south-east of Bannow Island and at the west of Rabbit Burrow in Fethard Bay. Very small fragmented linear strips of saltmarsh occur in the upper estuary as far north as the confluence of the Corock and Owenduff Rivers and along the other tributaries. The dominant type of saltmarsh present is Atlantic salt meadow although the Mediterranean type is also present; both of these habitats are listed on Annex I of the E.U. Habitats Directive. Typical species of the former include Common Saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Sea Thrift (*Armeria maritima*), Sea Plantain (*Plantago maritima*), Red Fescue (*Festuca rubra*), Creeping Bent (*Agrostis stolonifera*), Saltmarsh Rush (*Juncus gerardii*), Sea Arrow-grass (*Triglochin maritima*) and Sea Beet (*Beta maritima*). An abundance of Sea Purslane (*Halimione portulacoides*) is found in the Fethard and in part of the Taulaght saltmarshes. In the larger areas of saltmarsh Sea Rush (*Juncus maritimus*), a species more typical of Mediterranean salt meadows, is found. Other plants recorded are Lax-flowered Sea-lavender (*Limonium humile*) and Common Scurvy-grass (*Cochlearia officinalis*).

Halophilous scrub, another Annex I habitat, occurs in four of the larger saltmarsh areas. It is characterised by the presence of the legally protected plant Perennial Glasswort (*Arthrocnemum perenne*) which occurs in only a few sites in the country.

A mosaic of sand dune habitats which are listed on Annex I of the E.U. Habitats Directive occur in three areas at the edge of the estuary. Embryonic shifting dunes and White dunes are characterised by the presence of Lyme Grass (*Leymus arenarius*), Marram grass (*Ammophila arenaria*), Sea Spurge (*Euphorbia paralias*) and Sea Holly (*Eryngium maritimum*) in both Big Burrow and to the south east of Bannow Island.

The priority habitat fixed grey dunes is also present. Typical species here include Bird's-foot Trefoil (*Lotus corniculatus*), Kidney Vetch (*Anthyllis vulneraria*), Wild Thyme (*Thymus praecox*), Stork's-bill (*Erodium* spp.), Ribwort Plantain (*Plantago lanceolata*), Common Restharrow (*Ononis repens*), Mouse-ear Hawkweed (*Hieracium pilosella*), Field Wood-rush (*Luzula campestris*) and Wild Carrot (*Daucus carota*). Some areas of this dune type contain a carpet of the moss *Tortula ruraliformis* and lichens (*Cladonia* sp.). There is some Gorse (*Ulex* sp.) present beside the mossy area at the south-east of the site. Bee Orchid (*Ophrys apifera*) and Pyramidal Orchid (*Anacamptis pyramidalis*) have also been recorded. Sharp Rush (*Juncus acutus*) occurs in a dune slack associated with the grey dunes at Big Burrow. At the west of the system east of Bannow Island the dunes are quite high, reaching almost *c.* 15m. Non-native plant species, including Tree Mallow (*Lavatera arborea*) occur in several parts of the site.

Some freshwater habitats occur at the northern end of the site. These consist mainly of a mosaic of marsh, reedbed and Willow (*Salix* spp.). Species present include Common Reed, with young willows scattered throughout and Hemlock Water-dropwort abundant in the ground layer. In other areas the wetland vegetation consists of a mosaic of *Phragmites* reed bed, patches of Hard Rush (*Juncus inflexus*), Meadowsweet (*Filipendula ulmaria*), Creeping Buttercup (*Ranunculus repens*), Marsh Bedstraw (*Galium palustre*), Greater Tussock-sedge (*Carex paniculata*), Marsh Marigold (*Caltha palustris*) and occasional Bulrush (*Typha latifolia*) along some old drains. The wetland areas generally merge into a narrow band of dense scrub dominated by Blackthorn (*Prunus spinosa*) and Whitethorn (*Crataegus monogyna*) with some Ash (*Fraxinus excelsior*), Willow and Gorse.

Most of the estuary has been designated a Special Protection Area (SPA) under the E.U. Birds Directive, because of its significant bird interest, particularly during the winter. Parts of this area have also been designated a Wildfowl Sanctuary. There are large numbers of wintering wildfowl and waders who feed on the mudflats and sandflats and use the fringing vegetation of reedbed and saltmarsh for roosting and feeding. Populations present include internationally important numbers of Light-bellied Brent Goose (819), and nationally important numbers of Shelduck (475), Pintail (85), Golden Plover (3144), a species listed on Annex I of the E.U. Birds Directive, Lapwing (2,000), Knot (508), Dunlin (3,850), Black-tailed Godwit (697), Bar-tailed Godwit (334) and Redshank (377) (all figures mean peaks 1994/95 to 1997/98).

Important breeding populations found within the site include two species listed on Annex I of the E.U. Birds Directive (Little Tern and Kingfisher), a colony of Sand Martins in the cliffs at the west of the site and a heronry with approximately 15 breeding pairs. The rare Reed Warbler may also breed in the area. Otter and Common Seal occur within the site.

Landuse at the site consists mainly of shellfish farming; approximately 20 ha of the intertidal area is under cultivation. Current annual production of Oysters is approximately 100 tonnes, concentrated mainly on three farms. There are other farms, but these are only in the initial stages of cultivation and current production is negligible. There is evidence of poor farm management in some locations. There are numerous abandoned trestles in the intertidal zone and along the top of the shore. Grading equipment is permanently left on the shore and some areas of saltmarsh are being used as a grading area for Oysters. In some areas damage is caused to the shingle vegetation and to the substrate by tractors accessing the aquaculture farms. Any further increase in aquaculture poses a threat.

Other landuses include shooting, bird watching, conservation management, grazing in some of the dune areas, horse-riding on the beach and Big Burrow sand dunes, picnicing, swimming, sailboarding, jet-skiing, line fishing and bait digging. The removal of sand and beach material also occurs at the site.

The site is of considerable conservation significance for the large number of E.U. Habitats Directive Annex I habitats that it contains, including the priority habitat fixed grey dune. The legally protected Red Data Book plant species Perennial Glasswort also occurs. The site is also an SPA because of the important numbers of wintering wildfowl it supports, including an internationally important population of Light-bellied Brent Goose.

7.12.1999

SITE SYNOPSIS

SITE NAME: LADY'S ISLAND LAKE

SITE CODE: 000704

This site, situated in the extreme south-east of Ireland, is comprised of a shallow, brackish coastal lagoon separated from the sea by a sand and shingle barrier. The site includes the intertidal reef of Carnsore Point, and the area of reef to the west of the point.

The littoral reef at Carnsore is strewn with boulders, cobbles and patches of sand. It is exposed to prevailing wind and swells from the west. Tidal streams tend to be moderate but are strong in some areas. The bedrock is igneous granite, felsite and other intrusive rocks rich in silica. There is an extensive lichen zone at the top of the shore that is a good example of the wide bands of the lichens *Ramalina* spp, *Verrucaria* sp. mixed. with encrusting orange lichens, followed by a wide band of the black lichen *Verrucaria* sp. In the upper shore there is a very extensive zone of barnacles (*Semibalanus balanoides*), gastropod snails (*Littorina neritoides*) and limpets (*Patella vulgata*). This is followed by a narrow zone of *Fucus serratus* and *Mastocarpus stellatus*. At the bottom of the shore, the sublittoral fringe is characterised by the kelp *Laminaria digitata*, with serrated wrack *Fucus serratus* and thong weed *Himanthalia elongata* frequent and *Alaria esculenta* occasional. An understory of red algae is present. The communities are representative of this type of shore.

The lagoon habitat within the site is an excellent example of a sedimentary lagoon with a sand/shingle barrier. It is by far the largest and best example of this type of lagoon in the country and is in a relatively natural condition, despite regular breaching of the gravel barrier. The flora is typically brackish with two species of Tasselweed (*Ruppia maritima* and *R. cirrhosa*) and the Red Data Book charophyte species *Lamprothamnion papulosum* and *Chara canescens* (both lagoonal specialists). The fauna of the lagoon is rich with 44 taxa recorded in a short period in 1996. At least 13 lagoonal specialist species have been recorded which is the highest number for any lagoonal habitat in the country and at least 4 species appear to be rare. Three coleopteran indicator species were recorded in 1996, indicating an ecologically well developed site, and two of these are very rare species (*Atheta gyllenhalli*, *A. liliputana*).

The barrier system which stretches along the entire seaward part of this site from Carnsore Point westwards towards Tacumshin comprises the best example in Ireland of a landward moving (transgressive) system of gravel-based barrier. The sequence of back barrier washover and seepage structures are among the best in Europe, and, indeed, Lady's Island remains the last "intact" example in Europe. The substrate is predominantly sandy. The barrier is overlain for the most part by sand dunes, principally embryonic shifting dunes and marram dunes but also some more fixed areas. The vegetation is very typical of shingle or stony bank habitat. Species present

include Marram Grass (*Ammophila arenaria*), Sea Rocket (*Cakile maritima*), Sea Samphire (*Crithmum maritimum*), Sea Holly (*Eryngium maritimum*), Yellow-horned Poppy (*Glaucium flavum*) Sea Sandwort (*Honkenya peploides*) and Mayweed (*Tripleurospermum maritimum*). Of particular note is the occurrence of Cottonweed (*Othanthus maritimum*), an extremely rare plant which has its main Irish population here.

A rich swamp and freshwater marsh vegetation occurs at Ring Marsh. Elsewhere, the lagoon is fringed by marsh or wet grassland.

In addition to Cottonweed and the two charophyte species, three other Red Data Book species occur within the site: Lesser Centaury (*Centaureum pulchellum*), Penny Royal (*Mentha pulegium*) and Golden Dock (*Rumex maritimus*).

The lagoon has an internationally important tern colony, with four species breeding regularly - Sandwich (c.1,100 pairs), Roseate (107 pairs), Common (c.500 pairs) and Arctic (c.215 pairs) (figures are for 1999). These breed mostly on Inish island (which is outside of site), with only Arctic breeding on the smaller Sgarbheen island in recent years. An excellent diversity of duck species breed, including rare or scarce species such as Gadwall, Garganey, Shoveler and possibly Wigeon. Oystercatcher, Redshank and Lapwing breed on the islands. The site formerly supported internationally important numbers of wintering waterfowl, but in recent years numbers have declined drastically, possibly due to a decline in the abundance of their main food source, *Ruppia* spp.. Nowadays numbers are only of regional or local importance. Over the four winters 1994/95 to 1997/98 the main species were: Wigeon (652), Teal (200), Pochard (258), Tufted Duck (93), Scaup (46), Lapwing (1080) and Curlew (221).

This site is of high conservation importance, having three habitats which are listed on Annex I of the EU Habitats Directive and one of these (lagoons) with priority status. The site also has important ornithological interests.

SITE SYNOPSIS

SITE NAME: SALTEE ISLANDS

SITE CODE: 000707

This site comprises the Saltees Islands and a large area of the surrounding seas. There are two islands (Great Saltee and Little Saltee) and a constellation of islets and rocks. The islands are situated between 4 and 5 km off the south Wexford coast. As a group, they constitute a broken reef that protrudes from a seabed of sand and shell. The reef has a north-east/south-west orientation and is typically strewn with boulders, cobbles and patches of sand and gravel. Bedrock is metamorphic schist and gneiss. The site is of high conservation importance for marine habitats, with reefs, sea caves, large shallow bays, and intertidal sediments well represented.

The subtidal reefs range from being rugged bedrock with steep sided gullies to large boulders mixed with sand or cobbles and pebbles and are exposed to moderately exposed to wave action. The communities present are excellent examples of those typical of tideswept areas and many have fauna and flora that are tolerant of sand scour. The area is notable for the range of colonial sea squirts present. With the exception of a few examples the communities are very species rich, ranging from 78 to 117 species. No other area surveyed during the BioMar Survey had so many species rich communities. In shallow water the reefs support a forest of mixed kelp species with scour tolerant fauna on tideswept bedrock or a kelp forest of *Laminaria hyperborea* with a faunal cushion and foliose red algae. With increasing depth the kelp thins to a kelp park. The kelp understory ranges from a turf of hydroids, bryozoans and sponges and numerous colonial sea squirts to a community characterised by the bryozoan *Flustra foliacea* or an understory foliose red algae. On the sides of boulders a community with deadman's fingers *Alcyonium digitatum*, the keel worm *Pomatoceros triqueter*, and algal and bryozoan crusts is found.

In deeper water (15-30 metres) animal dominated reef communities occur. The most notable of these is a community dominated by the sea squirt *Stolonica socialis* and the bryozoan *Flustra foliacea*. This community is rich in colonial seasquirts in which *Archidistoma aggregatum*, *Sidnyum elegans* and *Distomus variolosus* and the solitary *Pyura squammata* occur.

Stolonica socialis in Ireland is only known from the south-east and north-west, while *Sidnyum elegans* has not previously been recorded in Ireland. *Distomus variolosus* in Ireland is only known from between Galway and Tralee Bay on the west coast and the east and south-east coasts. *Pyura squammata* appears to have a widespread but local distribution in Ireland. The sea anemone *Cataphellia brodricii* occurs in this community and in shallow water both around the Saltee Islands and other areas in the south-east. The only other records for this species are from Roaringwater Bay, Co. Cork. Where the bedrock is steep or large boulders are present the community present may be cushion sponges, branching sponges, *Nemartesia* sp. of hydroids and the 'rose coral' *Pentapora foliacea* or one of *Alcyonium digitatum* with massive sponges and

Nemartesia species. Beds of the brittlestars *Ophiothrix fragilis* and *Ophiocomina nigra* are also found in the area and on very steep to vertical reefs the plumose anemone *Metridium senile* may be found.

Species not mentioned above but that are found in the area with limited distribution in Britain and Ireland and considered to be worthy of conservation are the sponges *Tethyspira spinosa* and *Plocamilla coriacea*, the hydroids *Aglaophenia acacia* and *Tamarisca tamarisca*, *Halecium muricatum* and *Sertularella gaudichaudi*, seaslugs *Okenia aspersa* and the bryozoan *Schizomavella sarniensis* and burrowing brittlestar *Amphiura securigera*. The majority of these species occur in the ascidian dominated communities and the *Stolonica socialis* community in particular. *Tethyspira spinosa* is only known from the Saltees and Roaringwater Bay in Ireland. *Plocamilla coriacea* is a recently described species only recorded from the Saltees, Carnsore Point and Tuscar Rock, Co. Wexford and Kilkieran Bay, Co. Galway. *Aglaophenia acacia* is a southern species and occurs at several sites around the Saltees with only one previous record in Ireland. Prior to the BioMar survey the only 20th century records for *Halecium muricatum* in Britain and Ireland were from the Isle of Man. This species is now known to occur at the Saltees and in Co. Donegal. The records for *Sertularella gaudichaudi* from this area are the only Irish records. The sea slug *Okenia aspersa* occurs at two sites in the area and these are the only recent records for Ireland. *Schizomavella sarniensis* is a recently described species of bryozoan and to date in Ireland has only been recorded from around the Saltees. The current known distribution of the burrowing brittlestar *Amphiura securigera* in Ireland appears to be the south-east of the country and Kenmare River, Co. Cork..

The littoral sediments of the Saltee Islands area are moderately exposed to wave action. Talitrid amphipods live under drift algae on the strand line. The midshore is characterized by polychaete worms (*Hediste diversicolor*, *Malacoceros fuliginosus*, *Spio filicornis* and *Arenicola marina*), crustaceans (*Crangon crangon*) and crabs (*Carcinus maenas*). The low shore is characterized by the polychaete worms *Spio filicornis* and *Lanice conchilega*, the burrowing crustacean *Atylus swammerdamei*, crabs and bivalve molluscs *Fabulina fabula* and occasional *Cerastoderma edule*. The sublittoral sediment around the Saltees is composed of exposed, tideswept shelly gravel characterised by the burrowing sea cucumber *Neopendactyla mixta* with hydroids and bryozoans attached to cobbles.

Both islands have exposed rocky cliffs on the south and east sides. On Great Saltee these are mostly c.30 m high, and about half this on Little Saltee. The cliffs have a typical sea-cliff flora, with Thrift (*Armeria maritima*), Sea Campion (*Silene maritima*), Sea Plantain (*Plantago maritima*), Sea Aster (*Aster tripolium*), Scurvy Grass (*Cochlearia officinalis*), Rock Spurrey (*Spergularia rupicola*), Scentless Mayweed (*Matricaria maritima*), Red Fescue (*Festuca rubra*), Sea Spleenwort (*Asplenium marinum*) and Sea Samphire (*Crithmum maritimum*). Sea Stork's-bill (*Erodium maritimum*) also occurs and Golden-samphire (*Inula crithmoides*) has been recorded in the past. Excellent displays of lichens (*Ramalina* and *Xanthoria* spp.) are shown. The northern and western sides of both islands are fringed with shingle and boulder shores, with small areas of intertidal sandflats. Sea caves occur at the base of the cliffs on Great Saltee. Some of these are sub-littoral and some have boulder beaches at the back.

Since the abandonment of farming on the islands (apart from sheep grazing on Little Saltee), Bracken (*Pteridium aquifolium*) has become dominant over much of the terrestrial areas and often occurs in association with Bluebells (*Hyacinthoides non-scripta*). Brambles (*Rubus fruticosus*) are also frequent. Dry grassland still occurs in some of the old fields, with species such as Yorkshire Fog (*Holcus lanatus*), Ground Ivy (*Glechoma hederacea*), Ragwort (*Senecio jacobaea*), Nettles (*Urtica dioica*) and Thistles (*Cirsium spp.*).

Several springs and seepage areas provide habitat diversity. Species present include Water Cress (*Nasturtium officinale*), Jointed Rush (*Juncus articulatus*), Bog Stitchwort (*Stellaria alsine*), Marsh Pennywort (*Hydrocotyle vulgaris*) and, in at least one location, Early Marsh Orchid (*Dactylorhiza incarnata*).

The Saltee Islands are internationally important for their colonies of breeding seabirds. Notable are the Gannets on Great Saltee (2,050 pairs in 2000), Cormorants on Little Saltee (273 pairs in 2000), Shags on both islands (265 pairs), Fulmars, (525 pairs 1998-2000), Kittiwakes (2,125 pairs in 1999), and the auks – Guillemots (21,436 individuals), Razorbills (c.4,000 individuals) and Puffins (1,822 individuals). There is also a small Manx Shearwater colony (c.150-175 pairs) on Great Saltee. The breeding populations of large gulls have declined dramatically in recent years. The Lesser Black-backed Gull colony is still important (245 pairs), but numbers of Herring Gull (c.50 pairs) and Great Black-backed Gull (c.90) are now very low.

Peregrine Falcon breeds (1-2 pairs) and Chough (1 pair) occurs at the eastern edge of its Irish range. Both of these species are listed on Annex I of the EU Birds Directive. Great Saltee is a major site for spring and autumn landbird migration. Very large numbers of pipits, Swallows and martins, thrushes, warblers and finches occur, while smaller numbers of a great variety of other species (some very rare in Ireland) are also recorded. The island is also a good site for migrant Lepidoptera, especially Red Admirals, Painted Ladies, Clouded Yellows, Silver Y moths and Humming-bird Hawk Moths.

Great Saltee has a breeding population of Grey Seals, one of the very few in eastern Ireland. Up to 120 animals are present in autumn and up to 20 pups are produced annually.

This site is of high conservation importance for the occurrence of several habitats which are listed on Annex I of the EU Habitats Directive, of which reefs are of exceptional quality and diversity. The site is of international importance for breeding seabirds and also has two species which are listed on Annex I of the EU Birds Directive. In addition, the site has a breeding population of Grey Seal, an Annex II species on the EU Habitats Directive.

3.9.2001

SITE SYNOPSIS

SITE NAME: SCREEN HILLS

SITE CODE: 000708

The Screen Hills are located in the south-east of Ireland just north of the Wexford Slob. The site is characterised by the glacial landscape known as “kettle and kame”. This term refers to kettlehole lakes in hollows between hills.

The site contains two habitats listed on Annex I of the EU Habitats Directive: oligotrophic lakes and dry heath formations. The many lake basins mark the positions of former ice blocks in an acidic, sandy moraine. The lakes in the site are of two types: those which are more low-lying and in contact with groundwater are influenced by what is occurring over a wide area. Other lakes are suspended at a height above the regional water-table and are influenced by the area immediately surrounding them. These lakes can usually be considered oligotrophic although nutrient input from the adjacent land may change this. The lakes vary in size, most being pond-sized, and have widely different plant and animal communities. These include bog formation in all stages, from open sandy shores with only a narrow band of emergent vegetation, to wide rafts of floating fen type vegetation, to small *Sphagnum* bogs with Royal Fern (*Osmunda regalis*), to consolidated Heather/ Willow/ Birch (*Calluna/Salix/Betula*). Many plant species which are rare in south-east Ireland are currently found in these lakes. They include Fen Sedge (*Cladium mariscus*), White Water-lily (*Nymphaea alba*), Shoreweed (*Littorella uniflora*) and Lesser Bladderwort (*Utricularia minor*). Species of good quality boggy habitats are widespread, such as Lesser Tussock-sedge (*Carex diandra*), Marsh Cinquefoil (*Potentilla palustris*), Marsh St. John’s-wort (*Hypericum elodes*), Lesser Water-plantain (*Baldellia ranunculoides*) and Water Dock (*Rumex hydrolapathum*). Lake edges in grazed fields have species typical of exposed mud such as Water-purslane (*Lythrum portula*), Nodding Bur-marigold (*Bidens cernua*), Trifid Bur-marigold (*B. tripartita*) and Lesser Marshwort (*Apium inundatum*). Six-stamened Waterwort (*Elatine hexandra*) has been recorded but not recently re-found.

Dry heath at the site is extensive and species-rich. The heath vegetation at the site differs from most heaths elsewhere in the virtual absence of Heather, and in the presence of a diverse range of annual species. Substantial populations of the following Red Data Book species have been found at this very important and complex site and in other localities on and adjoining the moraine: Slender Cudweed (*Logfia minima*), Heath Cudweed (*Omalotheca sylvatica*), Hairy Bird’s-foot-trefoil (*Lotus subbiflorus*) and Bird’s-foot (*Ornithopus perpusillus*). Musk Thistle (*Carduus nutans*), another Red Data Book species, is also present in large numbers. It may have been introduced with cattle feed, but is thoroughly established. Other typical plant species of the heath at this site include Common Bent (*Agrostis capillaris*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Sorrel (*Rumex acetosella*), Tormentil (*Potentilla erecta*), Violets (*Viola* spp.), Common Cudweed (*Filago vulgaris*), Common Bird’s-foot-trefoil (*Lotus corniculatus*), Bracken (*Pteridium aquilinum*)

Gorse (*Ulex europaeus*) and the uncommon Knotted Clover (*Trifolium striatum*), Lesser Trefoil (*T. dubium*) and Annual Knawel (*Scleranthus annuus*).

The site is under threat because of reclamation for intensive agriculture. Some fields have been re-seeded with Perennial Rye-grass (*Lolium perenne*), while others have been brought into crop production. This process of agricultural improvement eventually leads to the loss of rare plant habitat and also increases the risk of pollution to the lakes.

The Screen Hills contain important examples of two habitats listed on Annex I of the EU Habitats Directive. The presence of several Red Data Book plant species adds further importance to this site.

SITE SYNOPSIS

SITE NAME: TACUMSHIN LAKE

SITE CODE: 000709

Tacumshin Lake is a shallow coastal lagoon situated on the south Co. Wexford coast about half way between Kilmore Quay and Carnsore Point and 15 km south of Wexford town. The lagoon was formerly a shallow sea bay which over time has been separated from the sea by a gravel/sand spit that has extended across the mouth of the bay from east to west, due to long-shore drift.

At times in the past this spit completely land-locked the lagoon, and at the end of the 19th century when this situation prevailed for some time the lake was drained by means of a large bore pipe set through the gravel/sand bar. Some of the drained lake bed was used by growing cereal crops. In the mid-1970s the spit again closed off the lagoon from the sea. The water level rose after exceptionally heavy rainfall and flooded several hundred hectares of low lying surrounding farmland. To relieve flooding the farmers reactivated the old drainage pipe and installed a second pipe at a lower level. The capacity of these two pipes is insufficient to prevent the lagoon filling up in winter when inflow from streams is greater than the outflow through the pipes. Thus, from about November to May the water level normally reaches the HWM as shown on the 6" O.S. maps, while from May to November the water level approximates to that of LWM as shown on the 6" O.S. maps. To speed the drainage from the lagoon two main drains were excavated leading to the landward end of the pipes.

The spit separating the lagoon from the sea has been built up by tide-borne gravels and wind-blown sand. The patches were formed from water and wind-borne silts and sands, consolidated by salt marsh vegetation. The lake bed is composed of silt and sand deposited by incoming tides and feeder streams. The surrounding lands are composed of glacial till.

The lagoon bed sediments support extensive areas of Glasswort (*Salicornia* spp.) where conditions remain brackish in summer. Other areas support Lesser Sea-spurrey (*Spergularia marina*). The permanent water bodies (including the excavated channels) and the marshy areas associated with stream inlets are colonised by Common Reed (*Phragmites australis*), Sea Club-rush (*Scirpus maritimus*) and Common Club-rush (*Scirpus lacustris*). Tasselweed (*Ruppia maritima*) forms dense stands in the permanent brackish water in the centre of the lagoon bed. Other typical lagoonal plants present include Horned Pondweed (*Zanichellia palustris*) and the rare charophyte (*Chara canescens*). The patches have dense Fescue (*Festuca* sp.) swards and patches of Sea Purslane (*Halimione portulacoides*) and Sea Rush (*Juncus maritimus*).

The gravel/sand barrier is in two parts, the eastern one being a mature dune system with low-growing herbs and grasses, such as Lady's Bedstraw (*Galium verum*) and

Kidney Vetch (*Anthyllis vulneraria*); the western one has a developing dune vegetation with the pioneering Sea Couch (*Elymus farctus*) dominating. Marram (*Ammophila arenaria*) is found throughout. Lyme Grass (*Leymus arenarius*) is found here at the western edge of its range, while the endangered and legally protected Cottonweed (*Otanthus maritimus*) has been recorded.

The waterfowl population of the lagoon is exceptionally diverse and the area supports large numbers of birds through the whole year, which is unusual among Irish wetlands. In summer the restricted area of water remaining in the lagoon supports a moulting flock of 300-400 Mute Swans, one of the largest concentrations in Ireland. The area is also an important summering site for non-breeding Black-tailed Godwits. During spring and autumn migration large numbers of waders use the lagoon as a resting and feeding area before continuing on to breeding or wintering grounds. Large numbers of Lesser Black-backed Gulls (up to 1,000) gather at the lagoon for some weeks prior to their autumn migration to Iberia. The lagoon is particularly attractive to vagrant North American and Eurasian waterfowl, especially in the autumn.

As water levels gradually rise in early winter large numbers of waterfowl – Mallard (104), Teal (663), Gadwall (51), Wigeon (3608), Pintail (278), Shoveler (118), Tufted Duck (122), Pochard (86), Coot (690), Brent Goose (45), Lapwing (5043), Black-tailed Godwit (131) and Curlew (268) congregate at the lagoon to feed on its rich food resources. The lagoon was formerly used by a large colony of Herring Gull and in 1975 90 pairs of the rare Roseate Tern attempted to nest on the Little Patch. In autumn the abundant insect life of the dry lake bed and Sea-spurrey (*Spergularia*) stands provide food for large numbers of migrating Swallows and Martins which also use the reed beds as a night roosting area, with up to 10,000 individuals being recorded in recent years.

The site is of particular conservation significance for its lagoon, which is an excellent example of a sedimentary lagoon with a gravel/sand barrier, that supports a wide variety of plants and animals, including many lagoonal specialist species. It is one of the largest examples of a lagoon in the country. This habitat, which is both threatened and declining throughout Europe, is listed on Annex I of the E.U. Habitats Directive with priority status. Good examples of four other habitats that are listed on Annex I of this directive occur within the site, i.e. drift lines, perennial vegetation of stony banks, embryonic shifting dunes and Marram dunes. Tacumshin Lake is also an important ornithological site and has been designated a Special Protection Area under the E.U. Birds Directive. It is nationally important for nine bird species, especially Gadwall and Pintail. The presence of a number of rare or scarce plant species adds additional interest to the site.

30.11.1999

SITE SYNOPSIS

SITE NAME: WEXFORD SLOBS AND HARBOUR

SITE CODE: 000712

Below Wexford the Slaney river opens out into an extensive shallow estuary which dries out considerably at low tide. The seaward side is protected by the Raven and Rosslare Points and behind these the North and South Slobs, consisting of two empoldered areas of farmland behind nineteenth century sea-walls. The reclaimed land is predominantly pasture and arable; flat, large, treeless fields give the area an open quality which many of the waterfowl species are dependant on. Extensive marshes occur around the inner northern part of the harbour, to the west of Castlebridge.

The original NNR on the North Slob of 110 ha., now a Ramsar site and an SPA, has been extended by a further 84 ha. The Raven (589 ha.) has been separately designated as a NNR and Ramsar site. Recently the whole site has been proposed as one SPA and Ramsar site.

The primary interest of the Slobs and Harbour is its wintering birdlife. Counts for the late eighties (Grimmet and Jones 1989) show internationally important numbers of *Cygnus columbianus* (3-yr. av. max. 168; max. 700), *Anser albifrons flavirostris* (5-yr. av. max. 7581; max. 11,000; most important wintering site in the world), *Branta bernicla hrota* (4-yr. av. max. 1245; max. 2000) and nationally important numbers of *Anas penelope* (3-yr. av. max. 4842), *A. platyrhynchos* (2500), *Pluvialis apricaria* (8400), *Vanellus vanellus* (22,000) and *Limosa limosa islandica* (3-yr. av. max. 816; max. 2400). More recent counts of the site are available but, except for the goose species, coverage of the three major subsites has not been synchronised (Sheppard 1993) and count totals for the entire site have not therefore been produced. In general the status of individual species has probably not changed significantly in the interim, with the exceptions of *L. limosa* and *A. penelope* which may now qualify as internationally important and ducks which as a group have decreased since the 1970s (Sheppard 1993). The protected flora species, Borrer's Salt-marsh Grass, *Puccinellia fasciculata*, which is confined to S.E. Ireland, is found along the channels of the North Slob NNR.

The Raven NNR is important for its large number of dune slacks and as a site for four species of rare vascular plants (*Pyrola rotundifolia* ssp. *maritima*, *Centaurium pulchellum*, *Epipactis phyllanthes*, *Monotropa hypopitys*).

A rich invertebrate fauna occurs on the beach and in the dunes, including species sensitive to disturbance that have disappeared elsewhere.

15th February 1995. □

SITE SYNOPSIS

SITE NAME: BALLYROE FEN AND LAKE

SITE CODE: 000747

These two small sites are located approximately 3 km south-west of Blackwater. They comprise a small lake, wet grassland, fen, reed swamp and arable fields with sandy banks.

The sites contain the legally protected Clustered Clover (*Trifolium glomeratum*) (Flora Protection Order 1987). This species is confined to sandy ground near the sea in south-eastern Ireland. It has been recorded from a total of 6 sites, but has only been seen at 2 of these since 1970, apparently declining but erratic in its appearances. Former sites, especially in Wicklow, have been damaged by road widening and reclamation.

Other species of the fen include Fen Bedstraw (*Galium uliginosum*), Slender Spike-rush (*Eleocharis uniglumis*), Small-leaved Elm (*Ulmus minor*), Strawberry Clover (*Trifolium fragiferum*), and Marsh Orchids (*Dactylorhiza majalis*, *D. majalis* subsp. *occidentalis*, *D. majalis* subsp. *purpurella*). Species recorded within the lake include Blinks (*Montia fontana*) and Trailing St. John's Wort (*Hypericum humifusum*).

15th February, 1995. Sue Mullinger. □

SITE SYNOPSIS

SITE NAME: FORTH MOUNTAIN

SITE CODE: 000761

Forth Mountain is located about 7 km west of Wexford. It is a ridge of resistant Cambrian quartzite standing up above the softer slates of the region. Its thin acid soils have been widely used for afforestation and building, and only toward the summit does the natural vegetation prevail. Here the land is covered by heathland. Wet heath occurs on the lower slopes and this grades into dry heath on the rockier ground. Both these communities include Heather (*Calluna vulgaris*), Heaths (*Erica tetralix* and *E. cinerea*), Gorse (*Ulex gallii* and *Ulex europaeus*), Bog Asphodel (*Nattheecium ossifragum*), Tormentil (*Potentilla erecta*), Mat-grass (*Nardus stricta*) and Bilberry (*Vaccinium myrtillus*). Mosses (*Sphagnum* spp.) become frequent on flatter areas and lichens (*Cladonia* spp.) are also noticeable.

Bird species which have been recorded breeding within the site are Skylark, Meadow Pipit, Wheatear, Stonechat, Whitethroat and Linnet.

The Common Lizard occurs widely within the site. Within the site the snail (*Lymnaea glabra*, Order Gastropoda) has been recorded in a small stream on the south west slopes. This is one of the rarest snails in Ireland and is not currently known from any other sites.

A number of butterflies characteristic of heathland have been recorded from the site, notably the Small Heath, Grayling and Wall Brown. The area also attracts the migratory species Red Admiral and Painted Lady.

Parts of the site have already been damaged by afforestation and further planting should be avoided. Overgrazing is another potential threat to the site.

Forth mountain is of ecological interest since it represents the most south-easterly heathland in the country. This community is not widespread and in many wetter regions has already passed to blanket bog. The site is in easy access to Wexford town and is a recognized amenity with considerable educational value.

15th February, 1995. Sue Mullinger. □

SITE SYNOPSIS

SITE NAME: SLANEY RIVER VALLEY

SITE CODE: 000781

This site comprises the freshwater stretches of the Slaney as far as the Wicklow Mountains; a number of tributaries the larger of which include the Bann, Boro, Glasha, Clody, Derry, Derreen, Douglas and Carrigower Rivers; the estuary at Ferrycarrig and Wexford Harbour. The site flows through the counties of Wicklow, Wexford and Carlow. Towns along the site but not in it are Baltinglass, Hacketstown, Tinahely, Tullow, Bunclody, Camolin, Enniscorthy and Wexford. The river is up to 100 m wide in places and is tidal at the southern end from Edermine Bridge below Enniscorthy. In the upper and central regions almost as far as the confluence with the Derry River the geology consists of granite. Above Kilcarry Bridge, the Slaney has cut a gorge into the granite plain. The Derry and Bann Rivers are bounded by a narrow line of uplands which corresponds to schist outcrops. Where these tributaries cut through this belt of hard rocks they have carved deep gorges, more than two miles long at Tinahely and Shillelagh. South of Kildavin the Slaney flows through an area of Ordovician slates and grits.

The site is a candidate SAC selected for alluvial wet woodlands, a priority habitat on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for floating river vegetation, estuaries, tidal mudflats and old oak woodlands, all habitats listed on Annex I of the E.U. Habitats Directive. The site is further selected for the following species listed on Annex II of the same directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Twaite Shad, Atlantic Salmon and Otter.

Floating river vegetation is found along much of the freshwater stretches within the site. Species present here include Pond Water-crowfoot (*Ranunculus peltatus*), Water-crowfoot (*Ranunculus* spp.), Canadian Pondweed (*Elodea canadensis*), Broad-leaved Pondweed (*Potamogeton natans*), Water Milfoil (*Myriophyllum* spp.), Common Club-rush (*Scirpus lacustris*), Water-starwort (*Callitriche* spp.), Hemlock Water-dropwort, Fine-leaved Water-dropwort (*Oenanthe aquatica*), Common Duckweed (*Lemna minor*), Yellow Water-lily (*Nuphar lutea*), Unbranched Bur-reed (*Sparganium emersum*) and the moss *Fontinalis antipyretica*. Two rare aquatic plant species have been recorded in this site: Short-leaved Water-starwort (*Callitriche truncata*), a very rare, small aquatic herb found nowhere else in Ireland; and Opposite-leaved Pondweed (*Groenlandia densa*), a species that is legally protected under the Flora Protection Order, 1999.

Good examples of wet woodland are found associated with Macmine marshes, along banks of the Slaney and its tributaries and within reed swamps. Grey Willow (*Salix cinerea*) scrub and pockets of wet woodland dominated by Alder (*Alnus glutinosa*) have become established in places. Ash (*Fraxinus excelsior*) and Birch (*Betula pubescens*) are common in the latter and the ground flora is typical of wet woodland

with Meadowsweet (*Filipendula ulmaria*), Angelica (*Angelica sylvestris*), Yellow Iris, Horsetail (*Equisetum* spp.) and occasional tussocks of Greater Tussock-sedge (*Carex paniculata*). These woodlands have been described as two types: one is quite eutrophic, is dominated by Willow and is subject to a tidal influence. The other is flushed or spring-fed subject to waterlogging but not to flooding and is dominated by Alder and Ash.

Old oak woodlands are best represented at Tomnafinnoge though patches are present throughout the site. At Tomnafinnoge the wood is dominated by mature, widely spaced Sessile Oak (*Quercus petraea*), which were planted around 1700, with some further planting in 1810. There is now a varied age structure with overmature, mature and young trees; the open canopy permits light to reach the forest floor and encourages natural regeneration of Oak. As well as Oak, the wood includes the occasional Beech (*Fagus sylvatica*), Birch (*Betula* sp.), Rowan (*Sorbus aucuparia*) and Scots Pine (*Pinus sylvestris*).

The shrub layer is well-developed with Hazel (*Corylus avellana*) and Holly (*Ilex aquifolium*) occurring. The ground layer consists of Great Wood-rush (*Luzula sylvatica*) and Bilberry (*Vaccinium myrtillus*), with some Bracken (*Pteridium aquilinum*) and Brambles (*Rubus fruticosus* agg.). Herbaceous species in the ground layer include Primrose (*Primula vulgaris*), Wood-sorrel (*Oxalis acetosella*), Common Cow-wheat (*Melampyrum pratense*) and Bluebell (*Hyacinthoides non-scripta*). Many of the trees carry an epiphytic flora of mosses, Polypody Fern (*Polypodium vulgare*), and lichens such as *Usnea comosa*, *Evernia prunastri*, *Ramalina* spp. and *Parmelia* spp.

Tomnafinnoge Wood is a remnant of the ancient Shillelagh Oak woods, and it appears that woodland has always been present on the site. In the past, the wood was managed as a Hazel coppice with Oak standards, a common form of woodland management in England but not widely practised in Ireland. The importance of the woodland lies in the size of the trees, their capacity to regenerate, their genetic continuity with ancient woodland and their historic interest. The nearest comparable stands are at Abbeyleix, Co. Laois and Portlaw, Co. Waterford.

Below Enniscorthy there are several areas of woodland with a mixed canopy of Oak, Beech, Sycamore (*Acer pseudoplatanus*), Ash and generally a good diverse ground flora. Near the mouth of the river at Ferrycarrig is a steep south facing slope covered with Oak woodland. Holly and Hazel are the main species in the shrub layer and a species-rich ground flora typical of this type of Oak woodland has abundant ferns - *Dryopteris filix-mas*, *Polystichum setiferum*, *Phyllitis scolopendrium* - and mosses - *Thuidium tamariscinum*, *Mnium hornum*, *Eurynchium praelongum*.

North of Bunclody, the river valley still has a number of dry woodlands though these have mostly been managed by the estates with the introduction of Beech and occasional conifers. The steeper sides are covered in a thick scrub from which taller trees protrude. At the southern end of the site, the Red Data Book species Yellow Archangel (*Lamiastrum galeobdolon*) occurs. Three more Red Data Book species have also been recorded from the site: Basil Thyme (*Acinos arvensis*), Blue Fleabane

(*Erigeron acer*) and Small Cudweed (*Filago minima*). A nationally rare species Summer Snowflake (*Leucojum aestivum*) is also found within the site.

Mixed woodlands occur at Carrickduff and Coolaphuca in Bunclody. Oak trees, which make up the greater part of the canopy, were originally planted and at the present time are not regenerating actively. In time, if permitted, the woodland will probably go to Beech. A fair number of Yew (*Taxus baccata*) trees have also reached a large size and these, together with Holly give to the site the aspect of a south-western Oak wood.

The site is considered to contain a very good example of the extreme upper reaches of an estuary. Tidal reedbeds with wet woodland are present in places. The fringing reed communities support Sea Club-rush (*Scirpus maritimus*), Grey Club-rush (*S. tabernaemontani*) and abundant Common Reed (*Phragmites australis*). Other species occurring are Bulrush (*Typha latifolia*), Reed Canary-grass (*Phalaris arundinacea*) and Branched Bur-reed (*Sparganium erectum*). The reed-swamp is extensive around Macmine, where the river widens and there are islands with swamp and marsh vegetation.

Further south of Macmine are expanses of intertidal mudflats and sandflats and shingly shore often fringed with a narrow band of salt marsh and brackish vegetation. Narrow shingle beaches up to 10 m wide occur in places along the river banks and are exposed at low tide. Upslope the shingle is sometimes colonised by Saltmarsh Rush (*Juncus gerardi*), Townsend's Cord-grass (*Spartina townsendii*), Common Saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Hemlock Water-dropwort (*Oenanthe crocata*) and Himalayan Balsam (*Impatiens glandulifera*).

Wexford Harbour is an extensive, shallow estuary which dries out considerably at low tide exposing large expanses of mudflats and sandflats. The harbour is largely sheltered by the Raven Point to the north and Rosslare Point in the south.

Other habitats present within the site include species-rich marsh in which sedges such as *Carex disticha*, *Carex riparia* and *Carex vesicaria* are common. Among the other species found in this habitat are Yellow Iris (*Iris pseudacorus*), Water Mint (*Mentha aquatica*), Purple Loosestrife (*Lythrum salicaria*) and Soft Rush (*Juncus effusus*). Extensive marshes occur to the west of Casltebridge associated with the tidal areas of the River Sow.

The site supports populations of several species listed on Annex II of the EU Habitats Directive including the three Lampreys - Sea Lamprey (*Petromyzon marinus*), River Lamprey (*Lampetra fluviatilis*) and Brook Lamprey (*Lampetra planeri*), Otter (*Lutra lutra*), Salmon (*Salmo salar*), small numbers of Freshwater Pearl Mussel (*Margaritifera margaritifera*) and in the tidal stretches, Twaite Shad (*Alosa fallax fallax*). A survey of the Derreen River in 1995 estimated the population of Freshwater Pearl Mussel at about 3,000 individuals. This is a significant population, especially in the context of eastern Ireland. The Slaney is primarily a spring salmon fishery and is regarded as one of the top rivers in Ireland for early spring fishing. The upper Slaney and tributary headwaters are very important for spawning.

The site supports important numbers of birds in winter. Little Egret are found annually along the river. This bird is only now beginning to gain a foothold in Ireland and the south-east appears to be its stronghold. Nationally important numbers of Black-tailed Godwit, Teal, Tufted Duck, Mute Swan, Little Grebe and Black-headed Gull are found along the estuarine stretch of the river. The mean of the maximum counts over four winters (1994/98) along the stretch between Enniscorthy and Ferrycarrig is: Little Egret (6), Golden Plover (6), Wigeon (139), Teal (429), Mallard (265), Tufted Duck (171), Lapwing (603), Shelduck (16), Black-tailed Godwit (93), Curlew (81), Red-breasted Merganser (11), Black-headed Gull (3030), Goldeneye (45), Oystercatcher (19), Redshank (65), Lesser Black-backed Gull (727), Herring Gull (179), Common Gull (67), Grey Heron (39), Mute Swan (259) and Little Grebe (17). Wexford Harbour provides extensive feeding grounds for wading birds and Little Terns, which are listed on Annex I of the E.U. Birds Directive have bred here in the past. The Reed Warbler, which is a scarce breeding species in Ireland, is regularly found in Macmine Marshes but it is not known whether or not it breeds in the site. The Dipper also occurs on the river.

The site supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger, Irish Hare and Daubenton's Bat. Common Frog (*Rana temporaria*), another Red Data Book species, also occurs within the site.

Agriculture is the main landuse. Arable crops are important. Improved grassland and silage account for much of the remainder. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river and to the populations of Annex II animal species within it. Run-off is undoubtedly occurring, as some of the fields slope steeply directly to the river bank. In addition, cattle have access to the site in places. Fishing is a main tourist attraction along stretches of the Slaney and its tributaries and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. Both commercial and leisure fishing takes place. There are some gravel pits along the river below Bunclody and many of these are active. There is a large landfill site adjacent to the river close to Hacketstown and at Killurin. Boating, bait-digging and fishing occur in parts of Wexford Harbour.

Waste water outflows, runoff from intensive agricultural enterprises, a meat factory at Clohamon and a landfill site adjacent to the river and further industrial development upstream in Enniscorthy and in other towns could all have potential adverse impacts on the water quality unless they are carefully managed. The spread of exotic species is reducing the quality of the woodlands.

The site supports populations of several species listed on Annex II of the EU Habitats Directive, and habitats listed on Annex I of this directive, as well as important numbers of wintering wildfowl including some species listed on Annex I of the EU Birds Directive. The presence of wet and broad-leaved woodlands increases the overall habitat diversity and the occurrence of a number of Red Data Book plant and animal species adds further importance to the Slaney River site.

24.10.2006

SITE SYNOPSIS

SITE NAME : LONG BANK

SITE CODE : 002161

Long Bank and Holdens Bed are situated several kilometres to the east of Rosslare and Wexford Harbour on the East coast. They are at the southern end of a series of offshore sand banks that run from Arklow to the south of Rosslare. Long Bank is approximately 12 km in length and, at its widest, is approximately 1.4 km in width, while Holdens Bed is approximately 3.7 km in length and 1.4 km wide. The two banks are separated by a channel and are separated from the Lucifer Bank to the east by an area of deeper water.

Offshore sand banks are generally constructed of sediment that ranges from cobbles to coarse sand and the sand is duned in large waves at least a meter in height and several meters in width. Where the current is strong the surface fauna is typically very sparsely scattered, with, e.g. an occasional starfish, crabs or hermit crabs. These banks, however, frequently have a distinctive meiofauna living within them and can be important feeding grounds for birds.

The site is of conservation importance for its submerged sandbanks, a habitat that is listed on Annex I of the EU Habitats Directive.

04.09.2001

SITE SYNOPSIS

SITE NAME: CARNSORE POINT

SITE CODE: 002269

This site is situated in the south-east of Co. Wexford and comprises the area of sea and underlying bedrock and sediments off Carnsore Point. The coastal boundary follows the High Water Mark from just north of Greenore Point to Tacumshin Lake; the seaward boundary follows a line just to the west of Black Rock, south of the Barrels Rocks, east of the Bailies and as far north as South Long light. The bedrock of the site is of granite, felsite and other intrusive rocks rich in silica. Most of the site comprises rocky reefs that are typically strewn with boulders, cobbles and patches of sand, both on the shore and underwater, and areas of intertidal mud/sand flats. The site is exposed to the prevailing wind and swells from the west. Tidal streams tend to be moderate but are strong in some areas. Offshore, Barrels Rocks are extremely exposed to the full force of Atlantic swells.

Carnsore Point has good examples of intertidal and subtidal reef communities typical of areas that are very exposed to moderately exposed to wave action. Both on the shore and underwater, the reefs are typically strewn with boulders, cobbles and patches of sand.

The intertidal reef to the east of Carnsore Point is moderately exposed to wave action. It has an extensive area of granite with the limpet, *Patella vulgata*, the topshell, *Osilinu* (= *Monodonta*) *lineatus*, and abundant juvenile barnacles in the upper shore. The midshore has a poorly defined band of *Fucus vesiculosus* followed by luxuriant knotted wrack *Ascophyllum nodosum* with the epiphyte *Polysiphonia lanosa*. The low shore is characterised by *Fucus serratus* with occasional *Laminaria digitata* and the green algae *Cladophora rupestris*. The communities at each are typical for this type of shore.

There is a good example of a subtidal reef community very exposed to wave action in shallow water at Barrels Rocks characterized by abundant *Mytilus edulis* with the brown alga, *Alaria esculenta*, an understory of pink coralline algal crusts and *Corallina officinalis* with the hydroid, *Tubularia* sp on steep surfaces. Also in shallow water but in areas with a little less exposure to wave action species rich (81 - 110 species) kelp park of *Laminaria hyperborea* is found with an understory of hydroids, sponges, and bryozoans but at two sites this community is unusual. At south-east of Splagh rock the understory is very similar to the sea squirt community of *Stolonica socialis* and *Polyclinum aurantium* whereas north east of Terchen the bivalve *Musculus discors* carpets much of the area with a variety of sponges, hydroids, sea squirts and bryozoans.

In deeper water at depths of 11-30 m there are excellent examples of the sea squirt community dominated by the sea squirts *Polyclinum aurantium* with the bryozoan *Flustra foliacea*. *Stolonica socialis* may also be present in this community. There is

an unusual variation of this community where the dominant sea squirt is *Polycarpa scuba* (= *rustica*) and the bryozoan *Flustra foliacea* is absent and at another site *Distomus variolosus* is the most abundant sea squirt. At 23 m low lying rock surrounded by coarse sand is covered by the bivalve *Musculus discors* which considered to be an uncommon community.

A number of species with a limited distribution in Ireland occur at two or more sites within the area. These are the sponge *Tethyspira spinosa*, the anemone *Cataphellia brodricii* and the sea squirts *Distomus variolosus*, *Stolonica socialis* and *Archdistoma aggregatum*, and *Polycarpa scuba*. The sea squirt *Sidnyum elegans* and the recently described bryozoan *Schizomavella sarniensis* each occur at a single site. *Tethyspira spinosa* is only known from the Saltees, Hook Head and Roaringwater Bay in Ireland. *Cataphellia brodricii* occurs in this community and in shallow water both around the Saltee Islands and other areas in the south-east. *Stolonica socialis* in Ireland is only known from the south-east and north-west coasts and in Britain in the south, south-west, and English Channel. *Sidnyum elegans* has not previously been recorded in Ireland and to date all records are from the south-east and it has a limited distribution in Britain. *Archdistoma aggregatum* is known from a few sites in south-west Britain, Northern Ireland, the Saltee Islands, Carnsore Point area and south of the River Shannon Estuary. *Polycarpa scuba* (= *rustica*) is only known from the Irish Sea, English Channel and Brittany.

The littoral sediment communities of Carnsore Point are represented by a moderately exposed shore at Carne Beach. There are talitrid amphipods living under drift algae on the strand line. The midshore is populated by polychaete worms (*Arenicola marina*, *Scolelepis foliosa* and *Nephtys cirrosa*), and the burrowing amphipod, *Bathyporeia pelagica*. The low shore is characterized by *Nephtys cirrosa*, crustacea (*Crangon crangon* and *Portumnus latipes*) and the bivalve mollusc (*Angulus tenuis*).

The site is of considerable conservation significance for the presence of intertidal mud/sand flats and of reefs, both habitats that are listed on Annex I of the E.U. Habitats Directive.

SITE SYNOPSIS

SITE NAME: LADY'S ISLAND LAKE SPA

SITE CODE: 004009

This site, situated in the extreme south-east of Ireland, comprises a shallow, brackish coastal lagoon separated from the sea by a sand and shingle barrier.

The lagoon habitat is an excellent example of a sedimentary lagoon with a sand/shingle barrier. It is by far the largest and best example of this type of lagoon in the country and is in a relatively natural condition, despite regular breaching of the gravel barrier. The flora is typically brackish with two species of Tasselweed (*Ruppia maritima* and *R. cirrhosa*) and the Red Data Book charophytes Foxtail Stonewort (*Lamprothamnion papulosum*) and *Chara canescens* (both lagoonal specialists). The fauna of the lagoon is rich with 44 taxa recorded in a short period in 1996. At least 13 lagoonal specialist species have been recorded which is the highest number for any lagoonal habitat in the country and at least 4 species appear to be rare. Three coleopteran (beetle) indicator species were recorded in 1996, indicating an ecologically well-developed site, and two of these are very rare species (*Atheta gyllenhalli*, *A. liliputana*). A rich swamp and freshwater marsh vegetation occurs at Ring Marsh. Elsewhere, the lagoon is fringed by marsh or wet grassland.

Lady's Island is of ornithological importance for both breeding and wintering birds, and is also an important stop-over point for passage migrants.

The site has one of the highest diversity of breeding wildfowl species in the country. Gadwall is resident, with at least 10 pairs breeding. It is one of the few sites in the country where Garganey have been known to breed, with probably 1-2 pairs in most years. Shoveler, another scarce nesting duck, breeds (1-3 pairs). Marsh Harrier (1-2 birds) is a regular visitor to Lady's Island in spring and summer, with Ring Marsh a favoured spot. Breeding may be attempted in some years.

Lady's Island formerly supported internationally important numbers of wintering waterfowl, but in recent years numbers have declined drastically, possibly partly due to a decline in the abundance of their main food source, *Ruppia* spp. Nowadays numbers are only of regional or local importance. Over the five winters 1995/96 to 1999/00 the main species present were: Whooper Swan (41), Wigeon (819), Teal (184), Pochard (299), Tufted Duck (110), Scaup (46), Coot (63), Lapwing (785), Black-tailed Godwit (43) and Curlew (221). In winter, the resident Gadwall population is supplemented by immigrants and in winter 1998/99 an exceptional total of 330 was recorded, one of the highest totals ever recorded in Ireland for this scarce duck.

Lady's Island is a regular stop-off point, mainly in autumn, for several wader species though numbers can vary considerably between years. Species which are recorded annually are Little Stint (up to 5 birds), Curlew Sandpiper (usually between 10 and 20

birds), Ruff (10-20 birds in most years), Spotted Redshank (1-2 birds), Green Sandpiper (1-2 birds) and Wood Sandpiper (1-2 birds).

Islands within the lagoon support an internationally important tern colony; while these are included in a separate SPA, the lagoon is obviously of importance to the overall breeding success of the terns. Mediterranean Gull, a typical lagoonal species, has bred in the tern colonies, and birds are regularly present on the lagoon. Other species which are occasional visitors to the site, and which are typical lagoonal species, include Black-necked Grebe, Little Gull, Black Tern, and Yellow Wagtail.

Deliberate breaching of the gravel barrier (for flood relief) leads to increased salinity of the lagoon which could be detrimental to its flora and fauna, including the bird species. The lagoon is also prone to eutrophication from agricultural and domestic effluents. Increased recreational activities in the area, including water sports, may cause disturbance to breeding and wintering birds. A population of feral Greylag Geese present at the site could have negative interactions with some bird species.

This important site supports one of the best examples of a lagoonal bird fauna in the country. Of particular note is that several of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, including Marsh Harrier, Ruff and Wood Sandpiper, as well as Whooper Swan and Golden Plover in winter. The site is important both for breeding and wintering birds and is one of the top sites in the country for Gadwall.

19.5.2005

SITE SYNOPSES

SITE NAME: THE RAVEN SPA

SITE CODE: 004019

The Raven SPA is situated on the north side of Wexford Harbour, incorporating the dynamic sand dune system of Raven Point and the coastal strip running north to Blackwater Head. The seaward boundary of the site extends a distance of 2 km from the shoreline.

The Raven sand dune system comprises a suite of coastal habitats listed on Annex I of the EU Habitats Directive. The dynamic nature of the system is best seen at the southern end of the site where sand flats, lagoons, driftlines and small dune slacks develop and are being continuously transformed by the activity of the sea and the wind. Much of the dunes was planted with commercial conifer forest in the 1930s and 1950s, partly as a coastal defence measure to stabilise the dunes and protect the polder behind. The unplanted areas of fixed dunes are fairly typical of the habitat, with a low open sward of grasses, herbs, bryophytes and lichens occurring amongst areas of Marram Grass (*Ammophila arenaria*). Species present include Red Fescue (*Festuca rubra*), Common Bird's-foot Trefoil (*Lotus corniculatus*), Lady's Bedstraw (*Galium verum*), and Sea Pansy (*Viola tricolor* subsp. *curtisii*). A feature of the site is the presence of dune slacks. Some of the current slack communities are associated with artificial ponds that were originally created as forest fire control reservoirs. Where the slacks maintain moist conditions, characteristic species include Creeping Willow (*Salix repens*), Common Sedge (*Carex nigra*) and Heath-grass (*Danthonia decumbens*). Dune ridges with Marram Grass (*Ammophila arenaria*) occur in a more or less continuous band as far as Blackwater Head. A number of rare and protected plants have also been recorded from this dune system including Round-leaved Wintergreen (*Pyrola rotundifolia* subsp. *maritima*), Lesser Centaury (*Centaureum pulchellum*) and Wild Asparagus (*Asparagus officinalis* subsp. *prostrata*). A small, though good example of Atlantic salt meadow occurs below the fixed dunes at the more sheltered western side of Raven Point.

The sheltered intertidal shore to the west of Raven Point supports communities of bivalves and worms (e.g. Common Cockle (*Cerastoderma edule*), Lugworm (*Arenicola marina*). The steeper shore to the north-east of the Point, which is predominantly sandy sediment, supports a sparser fauna, but with one notable species *Pseudorchestoidea brito* - a sandhopper which is known from only one other location in Ireland.

The Raven has important bird interests, being part of the Wexford Slobs and Harbour complex. Of critical significance is that it forms the principal night roost for the internationally important Wexford Harbour population of Greenland White-fronted Geese. A range of other waterfowl species are attracted to the site during winter, both for feeding and roosting purposes. The shallow waters within the site are particularly suitable for divers, grebes and seaduck. Counts during the five

winters 1995/96 to 1999/00 recorded the following species in Nationally Important numbers (figures are average maxima over the 5 winters): Cormorant (218), Common Scoter (3,234), Red-breasted Merganser (84), Grey Plover (448) and Sanderling (81). The Scoter population represents over 25% of the national total. The population of Red-throated Diver (77) is also of national importance and these shallow waters support one of the largest populations in the country. Other species which occur in significant numbers include Great Northern Diver (24), Great Crested Grebe (10), Slavonian Grebe (4), Wigeon (67), Mallard (75), Golden Plover (569), Lapwing (115), Knot (131), Dunlin (552), Bar-tailed Godwit (112), Curlew (93), Black-headed Gull (386) and Common Gull (157). Other species using the site include Shelduck (16), Oystercatcher (93) and Ringed Plover (12).

In addition to the Greenland White-fronted Geese, the occurrence of Red-throated Diver, Great Northern Diver, Slavonian Grebe, Golden Plover and Bar-tailed Godwit is of especial conservation interest as these are listed on Annex I of the E.U. Birds Directive.

The Raven SPA is an important breeding site for Little Tern, with up to 30 pairs in some years. The birds nest on the shingle and sandy beaches or on offshore sandbanks. Numbers vary a lot between years, partly due to the suitability of potential nesting habitat after the winter storms. A number of pairs of Ringed Plover breed on the sandy beaches.

This site is of international ornithological importance as it provides crucial roosting habitat for the Wexford Harbour flock of Greenland White-fronted Geese. The site also provides habitat for a range of other species, including six which have populations of National Importance; the Raven is probably the most regular site in the country for Slavonian Grebe. Of particular significance is that six of the wintering species are listed on Annex I of the E.U. Birds Directive, i.e. Red-throated Diver, Great Northern Diver, Slavonian Grebe, Golden Plover, Bar-tailed Godwit and Greenland White-fronted Goose. Little Tern, a species breeding in the site, is also listed on Annex I of this directive. Owing to the recognised importance of the area, Raven Point is a statutory Nature Reserve and a Ramsar site.

SITE SYNOPSIS

SITE NAME: BALLYTEIGUE BURROW SPA

SITE CODE: 004020

This site is located on the south coast of Co. Wexford between the towns of Kilmore Quay and Cullenstown. It comprises a sand and shingle barrier beach, approximately 8 km in length, and the estuary of the Duncormick River. The extensive overlying sand spit is known as the Burrow, while the estuary that it encloses is known as the Cull.

The site has a range of coastal habitats, including various types of sand dunes, salt meadows, and intertidal sand and mud flats. Former estuarine areas adjacent to the site have been reclaimed as polders and are intensively managed for agriculture. The dune system includes embryonic shifting dunes and Marram (*Ammophila arenaria*) dunes along the seaward side with more stable fixed dunes and dune heath inland. Typically, plants such as Marram, Portland Spurge (*Euphorbia portlandica*) and Sea-holly (*Eryngium maritimum*) are common on the seaward dunes. The fixed dunes are well-developed and species-rich and include species such as Common Restharrow (*Ononis repens*), Wild Pansy (*Viola tricolor* subsp. *curtisii*), Common Centaury (*Centaureum erythraea*), Wild Thyme (*Thymus praecox*) and Red Fescue (*Festuca rubra*). In places, scrub is encroaching and Bracken (*Pteridium aquilinum*) and Burnet Rose (*Rosa pimpinellifolia*) are common. The dune heath element is typified by Bracken and Gorse (*Ulex europaeus*).

Saltmarsh vegetation fringes The Cull, with such species as Sea Aster (*Aster tripolium*), Sea Arrowgrass (*Triglochin maritima*), Sea Lavender (*Limonium humile*) and Glasswort (*Salicornia* spp.). Part of the saltmarsh complex contains halophilous scrub vegetation, a very rare habitat in Ireland. The estuary empties almost entirely on most tides, apart from the main central channel. Sediments vary from muds in the innermost areas, especially towards Duncormick, to sands elsewhere. In addition to the Duncormick River, the estuary receives the flow from a network of canals which drain the extensive polders to the east and north-east of the site. Water quality of the inflowing freshwater is moderate to poor.

The principal ornithological importance of Ballyteigue Burrow SPA is wintering waterfowl, with an internationally important population of Brent Goose (290, average maximum in the five winters 1995/96-1999/00). It also supports nationally important numbers of Shelduck (167), Ringed Plover (133), Golden Plover (4,630), Lapwing (7,808), Black-tailed Godwit (474) and Bar-tailed Godwit (582). A range of other species occur in numbers of regional importance, including Wigeon (306), Grey Plover (69), Dunlin (1,020) and Redshank (206). Both the Golden Plover and Bar-tailed Godwit populations represent just over 3% of the respective national totals, while the Lapwing population is almost 4% of the total. The estuarine habitats provide feeding and roosting areas for the waterfowl species, though a lot of the birds also feed on the intensively managed lands of the adjacent polders.

Cullenstown Strand has a small colony of breeding Little Tern, though nesting may not occur in every year.

The site is host to a range of rare Red Data Book plant species, including Wild Asparagus (*Asparagus officinalis*), Borrer's Saltmarsh-grass (*Puccinellia fasciculata*), Perennial Glasswort (*Arthrocnemum perenne*) and Lesser Centaury (*Centaureum pulchellum*), and is the only Irish site for the protected (Flora (Protection) Order, 1999) lichen *Fulgensia fulgens*. The invertebrate fauna of the site includes a number of scarce species, examples being the bumble bees *Bombus distinguendus* and *B. sylvarum*, the jewel wasp *Hedychridium ardens* and the ant *Tetramorium caespitum*.

This coastal site is of high ecological value for its range of good quality coastal habitats, several being listed on Annex I of the E.U. Habitats Directive. It is a major site for wintering waterfowl, with an internationally important population of Brent Goose and a further six species with populations of national importance. Of particular note is that two of the species, Golden Plover and Bar-tailed Godwit, are listed on Annex I of the E.U. Birds Directive. Little Tern is also listed on Annex I of this Directive. Most of the site is designated as a Nature Reserve.

SITE SYNOPSIS

SITE NAME: WEXFORD HARBOUR AND SLOBS SPA

SITE CODE: 004076

Wexford Harbour is the lowermost part of the estuary of the River Slaney, a major river that drains much of the south-east region. The site is divided between the natural estuarine habitats of Wexford Harbour, the reclaimed polders known as the North and South 'Slobs', and the tidal section of the River Slaney. The seaward boundary extends from the Rosslare peninsula in the south to the area just west of The Raven Point in the north. Shallow marine water is a principal habitat, but at low tide extensive areas of intertidal flats are exposed. These vary from rippled sands in exposed areas to sandy-muds in the more sheltered areas, especially at Hopeland and the inner estuary to the west of Wexford bridge. The flats support a rich macro-invertebrate fauna, including the bivalves Cockle (*Cerastoderma edule*), Baltic Tellin (*Macoma balthica*) and Peppery Furrow-shell (*Scrobicularia plana*), the polychaetes Lugworm (*Arenicola marina*), Catworm (*Nephtys hombergi*) and Ragworm (*Hediste diversicolor*) and the crustacean *Corophium volutator*. Beds of mussels (*Mytilus edulis*) also occur. Salt marshes fringe the intertidal flats, especially in the sheltered areas such as Hopeland and towards Castlebridge. The Slobs are two flat areas of farmland, mainly arable and pasture grassland, empoldered behind 19th century sea-walls. The lands are drained by a network of channels which flow into two central channels, in parts several hundred metres in width. Water from the channels is pumped into the sea with electric pumps. The channels often support swamp vegetation. The river section of the site is extensive, extending to Enniscorthy, a distance of almost 20 km from Wexford town. It is noticeably tidal as far as Edermine Bridge but with tidal influence right up to Enniscorthy. In places, such as the Macmine marshes, it is several hundreds metres wide and here reedswamp is well developed

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Little Grebe, Great Crested Grebe, Cormorant, Bewick's Swan, Whooper Swan, Greenland White-fronted Goose, Light-bellied Brent Goose, Shelduck, Wigeon, Teal, Mallard, Pintail, Scaup, Goldeneye, Red-breasted Merganser, Hen Harrier, Coot, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Black-headed Gull, Lesser Black-backed Gull and Little Tern. The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is of international importance for several species of waterbirds but also because it regularly supports well in excess of 20,000 waterbirds (average peak of 49,030 for the 5 winters 1996/97-2000/01). Wexford Harbour and Slobs is one of the top three sites in the country for numbers and diversity of wintering birds. The

combination of estuarine habitats, including shallow waters for grebes, diving duck and seaduck, and the farmland of the polders, which include freshwater drainage channels, provides optimum feeding and roost areas for a wide range of species. Of particular importance is that it is one of the two most important sites in the world for Greenland White-fronted Goose (9,353) (all given figures for species are average peaks for the 5 winters 1995/96-1999/00). The geese feed almost entirely within the Slobs and roost at The Raven (a separate SPA). The site also has internationally important populations of Mute Swan (519), Light-bellied Brent Goose (1,469), Bar-tailed Godwit (1,843) and Black-tailed Godwit (768).

There are at least a further 25 species of wintering waterbirds which occur in numbers of national importance, i.e. Great Crested Grebe (123), Little Grebe (77), Cormorant (443), Whooper Swan (120), Bewick's Swan (191), Shelduck (903), Wigeon (2,838), Gadwall (37), Teal (1,601), Mallard (3,121), Pintail (78), Scaup (416), Goldeneye (151), Red-breasted Merganser (226), Coot (353), Oystercatcher (1,800), Golden Plover (5,590), Grey Plover (1,412), Lapwing (11,944), Knot (566), Sanderling (262), Dunlin (3,037), Curlew (1,924), Redshank (535), Black-headed Gull (6,136) and Lesser Black-backed Gull (1,036). Other species that use the site include Ringed Plover (69), Turnstone (41), Greenshank (12), Shoveler (24), Tufted Duck (114), Pochard (218), Common Gull (100+) and Little Egret. Several of the above populations represent substantial proportions of the national totals, especially Shelduck (6.2%), Scaup (6.6%), Red-breasted Merganser (6.2%), Grey Plover (21.9% and the top site in the country) and Black-headed Gull (6.1%). The Slobs is the most important and indeed one of the few sites in the country which supports a regular flock of Bewick's Swan. Numbers of wintering birds are often swelled by hard-weather movements from Britain and Europe, notably Golden Plover and Lapwing.

The site is a regular location for scarce passage waders such as Ruff, Spotted Redshank and Green Sandpiper, as well as Curlew Sandpiper in varying numbers. The rare Wood Sandpiper is seen each year, mainly in autumn.

Short-eared Owl and Hen Harrier are regular visitors in small numbers to the Slobs during winter. Of particular note is the presence of the Hen Harrier communal roost site.

The site is important for Little Tern as it has can hold a nationally important breeding colony (30 pairs were recorded in 2000). The Slobs support a nesting colony of Tree Sparrow, a very localised species in Ireland that is listed in the Irish Red Data Book. Another very localised breeding species, Reed Warbler, is well established within the swamp vegetation along the River Slaney and on the South Slob (estimated as at least 10 pairs).

A range of duck species breed, including Teal, Tufted Duck and, probably in most years, Shoveler.

The site supports populations of Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Short-leaved Water-starwort (*Callitriche truncata*), both protected, Red Data Book species. The Slobs are well known for their population of Irish Hare.

Part of the North Slob is a Nature Reserve and much of this slob is managed for the benefit of the wintering geese. Monitoring of the wintering birds of the Slob extends back to the 1960s and nowadays there is an ongoing monitoring and research programme. The North Slob has a wildfowl collection and an interpretative centre.

There are no imminent significant threats to the wintering bird populations. In the long-term, however, projected increases in sea level could cause problems in maintaining the Slob as farmland. In recent times, the South Slob has become less suitable due to changes in land use, including forestry operations, and a sustained programme of scaring. An increase in the amount of new housing in the vicinity of the North Slob has led to increased levels of disturbance in recent times. Localised reclamation has occurred in Wexford Harbour and any further reclamation of estuarine habitat is undesirable. Aquaculture occurs in Wexford Harbour though it is not known what effects, if any, this has on the bird populations.

Wexford Harbour and Slob SPA is one of the most important ornithological sites in the country. It is of world importance for Greenland White-fronted Goose, and supports internationally important populations of a further four species (Mute Swan, Light-bellied Brent Goose, Black-tailed Godwit and Bar-tailed Godwit). In addition, it has 25 species of wintering waterbirds with populations of national importance. Also of significance is that several of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Little Egret, Whooper Swan, Bewick's Swan, Greenland White-fronted Goose, Hen Harrier, Golden Plover, Bar-tailed Godwit, Ruff, Wood Sandpiper, Little Tern and Short-eared Owl. The site is an important centre for research, education and tourism.

SITE SYNOPSIS

SITE NAME: TACUMSHIN LAKE SPA

SITE CODE: 004092

Tacumshin Lake is a shallow coastal lagoon situated on the south Co. Wexford coast. The lagoon was formerly a shallow sea bay which, due to longshore drift, has over time become separated from the sea by a gravel/sand spit that extends across the mouth of the bay from east to west. At times in the past the lagoon was completely land-locked by the spit and, at the end of the 19th century, when this situation prevailed for some time, the lake was drained by means of a large bore pipe set through the gravel/sand bar. In the mid-1970s the spit again closed off the lagoon from the sea. To relieve subsequent flooding of surrounding farmland, the old drainage pipe was reactivated and a second pipe installed at a lower level. The capacity of these two pipes is insufficient to prevent the lagoon filling up in winter when inflow from streams is greater than the outflow through the pipes. To speed the drainage from the lagoon two main drains were excavated leading to the landward end of the pipes.

The lagoon bed sediments support extensive areas of Glasswort (*Salicornia* spp.) where conditions remain brackish in summer. Other areas support Lesser Sea-spurrey (*Spergularia marina*). The permanent water bodies (including the excavated channels) and the marshy areas associated with stream inlets are colonised by Common Reed (*Phragmites australis*), Sea Club-rush (*Scirpus maritimus*) and Common Club-rush (*Scirpus lacustris*). Tasselweed (*Ruppia maritima*) forms dense stands in the permanent brackish water in the centre of the lagoon bed. Other typical lagoonal plants present include Horned Pondweed (*Zanichellia palustris*) and the rare charophyte (*Chara canescens*). Areas of salt marsh, “the patches” have dense Red Fescue (*Festuca rubra*) swards, with Sea Purslane (*Halimione portulacoides*) and Sea Rush (*Juncus maritimus*). The gravel/sand barrier is in two sections, the eastern one being a mature dune system with low-growing herbs and grasses, such as Lady’s Bedstraw (*Galium verum*) and Kidney Vetch (*Anthyllis vulneraria*), while the western section has a developing dune vegetation with the pioneering Sea Couch (*Elymus farctus*) dominating. Marram (*Ammophila arenaria*) is found throughout and Lyme Grass (*Leymus arenarius*) also occurs. The endangered Red Data Book species, Cottonweed (*Otanthus maritimus*), has been recorded from the site in the past and is currently the subject of a re-introduction programme here.

The waterfowl population of the lagoon is exceptionally diverse and the area supports large numbers of birds through the whole year, which is unusual among Irish wetlands. In winter, Tacumshin is a principal roost for internationally important populations of both Whooper Swan (213) and Bewick’s Swan (189), the latter species now being very localised in Ireland. Both of these swans feed mainly on improved grassland in the vicinity of the site. A further 13 waterfowl species occur in numbers of national importance, i.e. Little Grebe (71), Mute Swan (218), Wigeon (4,725), Gadwall (119), Teal (975), Pintail (322), Shoveler (107), Tufted Duck (420), Coot

(1,669), Golden Plover (3,932), Grey Plover (85), Lapwing (5,302) and Black-tailed Godwit (538) - all figures are average peaks for the 5 seasons 1995/96-1999/00). Of particular note is that the Pintail population represents over 16% of the national total, whilst those of Wigeon, Gadwall and Coot are each just over 5% of the respective totals. Other species using the site in winter include Greenland White-fronted Goose (36), Dunlin (374), Curlew (391), Brent Goose (115), Shelduck (61), Pochard (314), Mallard (196), Redshank (74), Greenshank (6), Black-headed Gull (157) and Lesser Black-backed Gull (146). The site provides both feeding and roosting habitat for the various species, though some such as Golden Plover and Lapwing also feed outside of the site.

Marsh Harrier is a regular visitor in summer and nesting by this very scarce bird of prey is a possibility. Tacumshin is one of the few sites in Ireland where Garganey occurs regularly, and nesting probably occurs in most years. The swamp vegetation supports a good breeding population of the localised Reed Warbler (*c.* 10 pairs), whilst Sedge Warbler breeds commonly.

Tacumshin is an important site for passage waders, including Ruff (often more than 40 birds are recorded), Little Stint (more than 200 birds have occurred though up to 40 or 50 is more usual), Curlew Sandpiper (30 or more is regular), Green Sandpiper (up to 5 in most years), Spotted Redshank (up to 5 in most years) and the very scarce Wood Sandpiper (between 2 and 5 birds in most years). The lagoon is particularly attractive to vagrant North American and Eurasian waterfowl, with species such as Pectoral Sandpiper occurring annually. In autumn the abundant insect life of the dry lake bed provide food for large numbers of migrating Swallows and Martins which also use the reed beds as a night roosting area, with up to 10,000 individuals being recorded in recent years. Large numbers of Lesser Black-backed Gull (up to 1,000) gather at the lagoon for some weeks prior to their autumn migration southwards and some linger into the early winter period.

The lagoon habitat is potentially threatened by implementation of a more effective drainage system. In recent years parts of the lagoon and sand dune system have been seriously damaged by horse racing activities and such activities remain a threat. Significant disturbance occurs in summer and autumn due to a range of recreational activities, including dog exercising, bird watching and driving of cars.

Tacumshin Lake SPA is one of the most important ornithological sites in the country. The occurrence of internationally important populations of Whooper Swan and Bewick's Swan is of especial note, as is the presence of nationally important populations of an additional 13 wintering waterfowl species. It is one of the top sites in the country for species such as Pintail and Gadwall. It is also of importance for its summer visitors, including such rare and localised species as Marsh Harrier, Garganey and Reed Warbler. The site is also notable for a range of passage waders. Also of note is that a number of the species that occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Bewick's Swan, Golden Plover, Ruff, Wood Sandpiper and Marsh Harrier. Greenland White-fronted Goose which uses the site on occasions is also listed on Annex I of this directive.

31.3.2005