BELFAST LOUGH - SPECIAL PROTECTION AREA (SPA)

UK9020101

CONSERVATION OBJECTIVES

Including conservation objectives for Inner Belfast Lough ASSI and Outer Belfast Lough ASSI

Document Details

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Version	Date	Summary of Changes	Initials	Changes Marked
V1	05/08/1998	Internal working document	IE	
V1.1	August 2013	Review	IE	
V2.0	February 2015	Draft	IE	Complete review

Site relationship

To fully understand the site conservation requirements for this site it may be necessary to also refer to other site Conservation Objectives

This SPA adjoins Belfast Lough Open Water SPA. It is also contiguous with Outer Ards SPA and the proposed East Coast Marine SPA.

See also Boundary Rationale

1. INTRODUCTION

EU Member States have a clear responsibility under the Habitats and Birds Directives[1] to ensure that all habitats and species of Community Interest are maintained or restored to Favourable Conservation Status (FCS). Natura 2000 sites have a crucial role to play in achieving this overall objective since they are the most important core sites for these species and habitats. Each site must therefore be managed in a way that ensures it contributes as effectively as possible to helping the species and habitats for which it has been designated reach a favourable conservation status within the EU.

To ensure that each Natura 2000 site contributes fully to reaching this overall target of FCS, it is important to set clear conservation objectives for each individual site. These should define the desired state, within that particular site, of each of the species and habitat types for which the site was designated.

Once a site has been included in the Natura 2000 network, Member States are required to implement, on each site, the necessary conservation measures which correspond to the ecological requirements of the protected habitat types and species of Community Interest present, according to Article 6.1 of the Habitats Directive. They must also prevent any damaging activities that could significantly disturb those species and habitats (Article 6.2) and to protect the site from new potentially damaging plans and projects likely to have a significant effect on a Natura 2000 site (Article 6.3, 6.4).

Conservation measures can include both site-specific measures (i.e. management actions and/or management restrictions) and horizontal measures that apply to many Natura 2000 sites over a larger area (e.g. measures to reduce nitrate pollution or to regulate hunting or resource use).

In Northern Ireland, terrestrial/inter-tidal Natura 2000 sites are usually underpinned by the designation of an Area of Special Scientific Interest (ASSI) under the Environment (NI) Order 2002 (as amended).

2. ROLE OF CONSERVATION OBJECTIVES

Conservation Objectives have a role in

- Conservation Planning and Management – guide management of sites, to maintain or restore the habitats and species in favourable condition

- Assessing Plans and Projects, as required under Article 6(3) of the Habitats Directive - Habitats Regulations Assessments (HRA) are required to assess proposed plans and projects in light of the site's conservation objectives.

- Monitoring and Reporting – Provide the basis for assessing the condition of a feature, the factors that affect it and the actions required.

[1] 92/43/EEC and 2009/147/EC (codified version of Directive 79/409/EEC as amended)

3. DEFINITION OF FAVOURABLE CONSERVATION STATUS

Favourable Conservation Status is defined in Articles 1(e) and 1(i) of the Habitats Directive:

The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable as defined in Article 1(i).

For species, favourable conservation status is defined in Article 1(i) as when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and;
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and;
- there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long term basis.

3.1 DEFINITION OF FAVOURABLE CONDITION

Favourable Condition is defined as "**the target condition for an interest feature in terms of the abundance, distribution and/or quality of that feature within the site"**.

The standards for favourable condition (Common Standards) have been developed by JNCC and are applied throughout the UK. Achieving Favourable Condition on individual sites will make an important contribution to achieving Favourable Conservation Status across the Natura 2000 network.

4 GENERAL INFORMATION

COUNTY: Antrim and Down

G.R. J353 783 AREA: 432.14 ha.

Inner Belfast Lough ASSI

Outer Belfast Lough ASSI

5 SUMMARY SITE DESCRIPTION

The site comprises the sea lough of Belfast Lough. A range of inter-tidal habitats are present including extensive mud and sand flats, mussel beds, boulder shores and rock platforms. Adjoining habitat includes beaches and limited maritime heath and grasslands notably on the outer southern shore.

5.1 BOUNDARY RATIONALE

The SPA comprises most of Inner and all of Outer Belfast Lough ASSI and is coincident with the Ramsar boundary. All inter-tidal habitat is included together with any adjoining natural or semi-natural habitat. The outer boundary on the northern shore is the limit of wide sediment dominated shore (east of Kilroot the inter-tidal zone is generally narrow and typically boulder dominated). On the southern shore, it is the general limit of rock platform interspersed with mud and sand dominated embayments (east of Horse Rock typically alternates between broad sand beaches with intervening rock shores). Also included is the important brackish lagoon at the Harbour Estate (D2), together with the tidal channel at Dargan Road. All these areas are utilised by Redshank. Roost sites occurring outside the extent of natural or semi-natural habitat have not been included but their importance must not be underestimated. The boundary differs from the Inner Belfast Lough ASSI with the following areas within the ASSI excluded from the SPA

- Victoria Park – formerly tidal but now of limited importance
- Reduced section of Dargan Channel – limited to inter-tidal area only, excluding developed land.
- Inter-tidal area on lands north of Herdman Channel – developed for industry
- Inter-tidal area on lands north of Musgrave Channel – developed for industry
- Former lagoon, D3, in Belfast Harbour Estate - infilled

6 SPA SELECTION FEATURES

Feature Type	Feature	Population (5 year average 1995-2000)	Population at time of designation (ASSI)	Population at time of designation (SPA)	SPA Review population	Common Standards Monitoring baseline
Species	Redshank wintering population [a]	2266		2466	2466	2010 (1993/4-1997/98)
Species	Great Crested Grebe wintering population [a]	1646		Not listed	1385	1015 (1993/4-1997/98)
Habitat[1]	Habitat extent					
Habitat[1]	Roost site locations					

Table 1. List of SPA selection features.

[1] Habitat is not a selection feature but is a factor and is more easily treated as if it were a feature. Feature species are fully dependant on such habitats

NB Great Crested Grebe population now attributed to Belfast Lough Open Water SPA

Notes on SPA features – may not be applicable to all SPAs
The above table lists all relevant qualifying species for this site. As the identification of SPA features has and continues to evolve, species may have different status but all should be considered in the context of any HRA process. Ultimately all SPAs will be renotified to formalise species features.
[a] – species cited in current SPA citation and listed on current N2K dataform
[b] – species selected post SPA designation through UK SPA Review 2001
[c] – species highlighted as additional qualifying features through the UK SPA Review 2015 or the UK marine SPA programmes.

6.1. ADDITIONAL ASSI SELECTION FEATURES

Feature Type (i.e. habitat, species or earth science)	Feature	Size/ extent/ pop[.]	Population at time of designation (ASSI)	Common Standards Monitoring baseline
Habitat	Maritime cliffs and slope (Outer Belfast Lough ASSI)			
Species	Invertebrate assemblage			
Species	Turnstone wintering population		614	503 (1989/90-1995/96)
Species	Cormorant wintering population			276 (1989/90-1995/96)
Species	Shelduck wintering population		589	278 (1989/90-1995/96)
Species	Mallard wintering population			321 (1989/90-1995/96)
Species	Scaup wintering population			29 (1989/90-1995/96)
Species	Eider wintering population			391 (1989/90-1995/96)
Species	Goldeneye wintering population			231 (1989/90-1995/96)
Species	Red-breasted Merganser wintering population			136 (1989/90-1995/96)
Species	Oystercatcher wintering population		6584	4782 (1989/90-1995/96)
Species	Ringed Plover wintering population			93 (1989/90-1995/96)
Species	Lapwing wintering population			1770 (1989/90-1995/96)
Species	Knot wintering population			56 (1989/90-1995/96)
Species	Dunlin wintering population		1440	742 (1989/90-1995/96)
Species	Black-tailed Godwit wintering population		433	135 (1989/90-1995/96)
Species	Curlew wintering population		1271	871 (1989/90-1995/96)
Earth Science	Cultra – Craigavad Carboniferous stratigraphy (Outer Belfast Lough ASSI)			
Earth Science	Grey Point - Horse Rock Lower Palaeozoic stratigraphy (Outer Belfast Lough ASSI)			

Earth Science	Cultra Permian stratigraphy (Outer Belfast Lough ASSI)			

Table 2. List of ASSI features, additional to those that form all or part of SPA selection features. These will be referred to in ANNEX II.

7 CONSERVATION OBJECTIVES

The Conservation Objective for this site is:

To maintain each feature in favourable condition.

For each SPA feature there are a number of component objectives which are outlined in the tables below. For each feature there are a series of attributes and measures which form the basis of *Condition Assessment*. The results of this will determine whether a feature is in favourable condition, or not. The feature attributes and measures are found in the attached annexes.

8 BELFAST LOUGH SPA CONDITION ASSESSMENT 2014

Species	2007/08	2008/09	2009/10	2010/11	2011/12	CSM	5 yr mean	% CSM	Status
Redshank	1163	1381	1837	1331	771	2010	1296.6	**64.51**	Unfavourable

Species	2007/08	2008/09	2009/10	2010/11	2011/12	CSM	5 yr mean	% CSM	Status
Great Crested Grebe	2148	1055	1174	325	780	1015	1096.4	**108.02**	Favourable

9 SPA SELECTION FEATURE OBJECTIVES

To maintain or enhance the population of the qualifying species
To maintain or enhance the range of habitats utilised by the qualifying species
To ensure that the integrity of the site is maintained;
To ensure there is no significant disturbance of the species and
To ensure that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species

Feature	Component Objective
Redshank wintering population	As above
Great Crested Grebe wintering population	As above
Habitat extent	To maintain or enhance the area of natural and semi-natural habitats used or potentially usable by Feature bird species (X ha intertidal area), subject to natural processes
Habitat extent	Maintain the extent of main habitat components subject to natural processes
Roost sites	Maintain or enhance sites utilised as roosts

Table 3. SPA Component objectives

9.1 ADDITIONAL ASSI SELECTION FEATURE OBJECTIVES

Feature	Component Objective
Maritime cliffs and slope (Outer Belfast Lough ASSI)	To maintain or extend, as appropriate, the area of the coastal habitat mosaic subject to natural processes
Invertebrate assemblage	To be finalised
Turnstone wintering population	As for SPA selection feature objectives
Cormorant wintering population	As for SPA selection feature objectives
Shelduck wintering population	As for SPA selection feature objectives
Mallard wintering population	As for SPA selection feature objectives
Scaup wintering population	As for SPA selection feature objectives
Eider wintering population	As for SPA selection feature objectives
Goldeneye wintering population	As for SPA selection feature objectives
Red-breasted Merganser wintering population	As for SPA selection feature objectives
Oystercatcher wintering population	As for SPA selection feature objectives
Ringed Plover wintering population	As for SPA selection feature objectives
Lapwing wintering population	As for SPA selection feature objectives
Knot wintering population	As for SPA selection feature objectives
Dunlin wintering population	As for SPA selection feature objectives
Black-tailed Godwit wintering population	As for SPA selection feature objectives
Curlew wintering population	As for SPA selection feature objectives
Cultra - Craigavad Carboniferous stratigraphy	Maintain the extent of exposures and access to them subject to natural processes
Grey Point - Horse Rock Lower Palaeozoic stratigraphy	Maintain the extent of exposures and access to them subject to natural processes
Cultra Permian stratigraphy	Maintain the extent of exposures and access to them subject to natural processes

Table 4. ASSI Component objectives

10 MANAGEMENT CONSIDERATIONS

See also Views About Management for relevant ASSIs

Owner/Occupier's **–** (to be used to identify any key management considerations arising from ownership e.g. owners/organisations having an obvious bearing on conservation matters or from management agreements).

Key landowners and leasees within the SPA, relevant to the site management, include Crown Estate Commissioners, Belfast Harbour Commissioners, NIEA, the following council areas (Belfast, Ards, Antrim and Newtownabbey, Mid and East Antrim), Belfast City Airport, RSPB and Private Individuals. There may be conflicts of interest between the requirements of individual/organisations, both within and adjacent to the SPA, and the site management needs.

Positive management within the site include the creation of two new lagoons north east of the Dargan Road Tip by Belfast Council. Additionally NIEA lease D2 from Belfast Harbour Commissioners which is managed by RSPB. RSPB are also involved in the management of Whitehouse Pools which are owned by Antrim and Newtownabbey Council.

Adjacent commercial operations which may impact upon the SPA include BP Oil, AES (Kilroot Power Station) and Dargan Road Refuse Tip. Kilroot Power Station located adjacent to Belfast Lough SPA is a Part A Process under the Industrial Pollution Control Order. Additionally sewage discharge points from Duncrue Street and Kinnegar Sewage Treatment Works may impact upon the site.

11. MAIN THREATS, PRESSURES, ACTIVITES WITH IMPACTS ON THE SITE OR SITE FEATURES

Notifiable Operations **-** Carrying out <u>any</u> of the Notifiable Operations listed in the schedule could affect the site. The list below is not exhaustive, but deals with the most <u>likely</u> factors that are either affecting Belfast Lough SPA, or could affect it in the future. Although, features 1, 2, 3, 4 etc, are the qualifying SPA features, factors affecting ASSI features are also considered.

Generic site/feature issues – includes activities relating to both Belfast Lough and Belfast Lough Open Water SPAs

Issue	Threat/comments	Local considerations	Action
Adjoining habitat	Particularly important for swans and geese as well as providing high tide roost locations. Significant changes in land management and disturbance are key considerations. Such areas lie without the site making effective management of developments other than those for which planning permission is required, difficult.	Most adjoining habitat utilised by birds other than as roost sites, comprises managed amenity grass. This provides important additional feeding opportunities for selected wader species but would not merit any formal designation.	Assess importance of adjoining and distant playing grounds, fields and other feeding areas. Assess impacts from development.
Aquaculture	Disturbance is a minor consideration unless carried out deliberately to minimise losses to shell-feeding waterfowl. Alteration of natural littoral and sub-littoral communities through seeding, tray/trestle cultivation, dredging/control of pest species. Naturalisation of introduced species – both the shellfish themselves and associated species e.g. algae and disease vectors.	Much of Inner Belfast Lough has active licences for shellfish production.	Liaise with DARD Fisheries Division. Assess all license applications individually. Current extent of licences may significantly alter seabed conditions. Consider the collective impact.
Bait digging – commercial or 'recreational' and shellfish gathering.	Disturbance and impact on sediment and invertebrate fauna – may be positive through making deeper prey items available on surface. Shellfish gathering represents a net loss to the system in terms of biomass. Generally unregulated.	Appears to be organised on a commercial basis and is widespread.	Monitor scale of activity. Consider the collective impact.
Boating activity – commercial	Disturbance and potential for impact from high-speed liners.	Major shipping channel plus cross-lough activity imminent. The former is long-established.	Formal consultation likely relating to new schemes. Need to assess new trans-lough impact. Consider the collective impact.
Boating activity – recreational	Disturbance and potential for impact especially from jet skis. Generally relevant to particularly sensitive areas within site.	Sailing clubs at Carrickfergus, Whiteabbey, Holywood and Cultra. Additional slipways and quays.	Liaise with appropriate authority with codes of good practice, zoning and use of by-laws as necessary. Consider the collective impact.
Coastal protection schemes	Where there is no history of this, it impacts on natural beach systems with loss of habitat.	Much of north and inner shores are heavily engineered. Balance in natural rock outcrop. No ongoing coastal erosion problems noted.	Liaise with Planning Service and other parties with an involvement in coastal management.
Dredging	Generally only an issue in relation to commercial shipping	Major capital dredging programme	Liaise with port authority and Environmental

	channels. Issues include disturbance, remobilisation of contaminated sediment and spoil dumping zones.	ongoing. Established ongoing maintenance programme.	Protection as required with regard to water quality issues and pollution incidents.
Fishing – commercial or recreational	Minimal disturbance consideration but may represent 'competition' for piscivorous birds. Represents a net loss to the system in terms of biomass.	Most commercial activity related to aquaculture. Recreational fishing not deemed to be a problem.	Liaise with DARD and fishing authority as required. Liaise with angling clubs as required.
Habitat extent – inter-tidal	Loss of habitats through development, changes in coastal processes. Loss of inter-tidal habitat is a critical issue as this is the feeding zone for the majority (numbers and species) of birds.	There has been extensive loss of inter-tidal habitat historically. Inner lough mudflats particularly vulnerable.	Assess planning applications. Monitor using aerial photography.
Habitat extent – open water	Loss likely to be limited but expansion of commercial port facilities can impact on key localities.	Ongoing and further planned harbour developments will reduce open water area. Probably insignificant.	Assess planning applications. Consider the collective impact.
Habitat quality – inter-tidal	Alteration of habitat quality through diminution of water quality, invasive species or changes in coastal processes.	Historically impacted by industrial and sewerage effluent.	Assess planning applications. Liaise with Environmental Protection as required with regard to water quality issues and pollution incidents. Consider the collective impact.
Habitat quality – open water	Alteration of habitat quality through diminution of water quality or invasive species.	Historically impacted by industrial and sewerage effluent. Vulnerable to pollution incidents from both industry and shipping.	Assess planning applications. Deal with invasive alien species by preventing their spread or reducing their impact. Liaise with Environmental Protection as required with regard to water quality issues and pollution incidents. Consider the collective impact.
High tide roosts	An essential component of sites hosting waders. Development of adjoining ground or actual traditional roost localities may adversely impact on the sites carrying capacity. Many such sites lie without the site making effective management of developments, other than those for which planning permission is required, difficult.	Localities should be mapped. Loss of wader roost sites within the Inner Lough has been notable.	Assess planning applications. Identify key areas and promote site management schemes. Review use of Wildfowl Refuges. Consider the collective impact.
Introduced species	Range of threats from loss of habitat, feeding competition, disease, hosting species presenting a threat outside of the site.	Not evident but given nature of the site, could be an issue through commercial shipping and aquaculture.	Liaise with appropriate authority. Consider feasibility of elimination. Participate in national/international initiatives.
Recreational activities.	Disturbance is the main consideration although vehicle access may also lead to beach compaction and impacts on beachhead habitats.	Shoreline has been heavily used for recreational activities over long timescale. Cumulative disturbance impacts (e.g.	Liaise with local authorities and other managing parties.

		boating, wildfowlers, walkers, dogs etc) may be a significant factor for wintering bird populations impacting on both feeding (inter-tidal) and roosting birds	
Research activities.	Census and ringing activities especially have the potential to impact on bird populations, particularly at breeding sites.	Past cannon netting has occurred with ongoing high and low tide WEBS counts.	Census and ringing activities to be undertaken by competent individuals, appropriately trained. In case of ringers, appropriate license must be held.
System dynamics	Cuts across many other issues. Dynamic systems, especially coastal, can be affected by many factors especially engineered structures and significant changes in dominant wind direction or storm frequency. Many systems may indeed still be undergoing responses to historical developments e.g. partial reclamation, seawall construction. Changes may include alteration in sediment grade, shifts in patterns of erosion and deposition etc. Consequences for habitat and species utilisation of the site can be profound.	Main considerations are historical reclamation, especially along the north shore and Sydenham areas, together with widespread coastal engineering works and ongoing development within the Belfast harbour area. Sediment responses may be expected. Changes in water quality have led to an expansion of mussel beds, in turn altering system behaviour. Expanding aquaculture represents an alteration to substrate.	Human induced change should be minimised. Assess planning applications and liaise with other relevant authorities. Ad hoc dumping and removal of natural materials should be managed. Major natural shifts in system behaviour may be identified through analysis of aerial photographs and site monitoring. Major and consistent changes to patterns of habitat distribution and bird utilisation of the site should be noted.
Wildfowling	Has direct effect through bag sizes/bag species and wider disturbance issue. Issue of regulated (through recognised shooting clubs) and ad hoc shooters. Lead shot on grazing lands.	Very limited shooting occurs off the north foreshore dump – presumably ad hoc.	Liaise with Belfast Council who control access to dump, if this is felt to be a problem.

Table 5. List of site/feature management issues

12. MONITORING

Monitoring of our Special Protection Areas takes place at a number of levels, using a variety of methods. Methods for both Site Integrity Monitoring and Condition Assessment can be found in the Monitoring Handbook (To be written).

Maintain the integrity of the site. Undertake Site Integrity Monitoring (SIM) at least annually to ensure compliance with the SPA/ASSI schedule. The most likely processes of change (e.g. dumping, infilling, gross pollution) will either be picked up by Site Integrity Monitoring, or will be comparatively slow (e.g. change in habitat such as growth of mussel beds). More detailed monitoring of site features should therefore be carried out by Site Condition Assessment on a less frequent basis (every 6 years initially to pick up long-term or more subtle changes). A baseline survey will be necessary to establish the full extent of the communities present together with the current condition of the features, against which all further condition assessments will be compared.

In addition, detailed quality monitoring or verification monitoring may be carried out from time to time to check whether condition assessment is adequate to detect long-term changes that could affect the site. This type of quality monitoring may involve assessment of aerial photographs to determine site morphological changes. Methodology for this is being developed.

12.1 MONITORING SUMMARY

1. Monitor the integrity of the site (Site Integrity Monitoring or SIM) – Complete boundary survey to ensure integrity of site and that any fencing is still intact. Ensure that no sand extraction or dumping has been carried out within the SAC boundary. This SIM should be carried out once a year.

2. Monitor the condition of the site (Condition Assessment) - Monitor the key attributes for each selection feature (dune, saltmarsh, species). This will detect if the features are in favourable condition or not. See Annexes I and II for SAC and Additional ASSI Features respectively.

The favourable condition table provided in Annex 1 is intended to supplement the conservation objectives only in relation to management of established and ongoing activities and future reporting requirements on monitoring condition of the site and its features. It does not by itself provide a comprehensive basis on which to assess plans and projects, but it does provide a basis to inform the scope and nature of any appropriate assessment that may be needed. It should be noted that appropriate assessments are a separate activity to condition monitoring, requiring consideration of issues specific to individual plans or projects.

12.2. ADDITIONAL MONITORING ACTIONS UNDERTAKEN FOR SITES IN UNFAVOURABLE CONDITION

Monitoring actions set out in section 6 and Annex 1 will use, amongst other attributes, bird population data to determine site condition. In the event of a significant population decline being detected, a series of subsequent actions will be initiated. The following list is not exhaustive, actions will be site dependant, but the order of these points IS hierarchical i.e. consider point 1, then 2, etc.

1. Assess the site population in a wider geographical context – Northern Ireland, Ireland, UK, world. Refer to BTO ALERT limits etc. Liaise with other competent bodies to meaningfully assess wider pattern. No site action if site decline mirrors regional pattern the cause of which is not related to the site. Action may be required at regional or larger scale. If the cause of the regional population decline (e.g. eutrophication) is found at the site then action may be necessary, but this may need to form part of a network of strategic species action. Further research may be required.
2. Assess the site population in a wider geographical context – Northern Ireland, Ireland, UK, Europe, world. Determine if site losses are balanced by gains elsewhere e.g. breeding terns. Review site condition to determine if losses are due to site deterioration. Determine if possible whether population has relocated within SPA series (national, biogeographical, European). Note that the reasons for such locational changes may not be readily identifiable. Further research may be required.
3. For passage/wintering species assess breeding information. No site action if site decline is due to breeding ground failure, unless breeding ground failure is related to poor adult condition resulting from factors affecting wintering / passage birds.
4. Determine whether a major incident has affected the site e.g. toxic impact on prey items, predation event or geographical shift in available prey. Ability to respond to impacts may be limited.
5. Assess condition of principal site habitats e.g. vegetational composition and structure, change in habitat balance e.g. mudflats reduced by encroaching mussel beds.
6. Assess prey availability. Issues to consider are both within site e.g. water quality, broad site management, and without site e.g. climatically driven factors.
7. Assess whether there have been any changes in any other site features or management practices (see Table 3) that may have affected populations of site selection features.
8. Long-term site value must be considered even when it is found to be in unfavourable condition for a number of reporting cycles. This is particularly important for breeding seabird and wader sites where ongoing appropriate management may ultimately encourage re-establishment of a favourable population.

13. SELECTION FEATURE POPULATION TRENDS

Site trends are reported using running 5 year means of annual maximum count (WeBS data). Long term trends in index values have been used to assess changes in overall wintering

populations for Northern Ireland and UK (WeBS data). Caution is always necessary in the interpretation and application of waterbird counts given the limitations of these data. The reduced number of both sites and birds in Northern Ireland, result in a greater degree of fluctuation. Trends for Republic Ireland are based on five years of data 1994-1999 (I-WeBS data). Consequently short-term fluctuations apparent in the data series may reflect changes in between year productivity, or other short term phenomena, rather than being indicative of a real change in a population.

Updated information on site, regional, national and international population trends for feature species will be contained in the most recent SPA site condition assessment report.

SPECIES	SITE TREND	NI TREND	ROI TREND	UK TREND	COMMENTS
Redshank	Stable	Fluctuating-Incr	Stable	Stable-Fluctuating	
Great Crested Grebe	Stable	Increasing	Moderate Fluctuatic	Increasing-Stable	Stable circa 1990 in UK.

References (to be completed)

Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds). 2001.*The UK SPA network: its scope and content* JNCC, Peterborough.

Way, L.S., Grice, P., MacKay, A., Galbraith, C.A., Stroud, D.A. & Pienkowski, M.W. 1993. Ireland's internationally important bird sites: a review of sites for the EC Special Protection Area network. JNCC, Peterborough, 231 pp.

The Wetland Bird Survey: Wildfowl and Wader Counts. BTO/WWT/RSPB/JNCC. Various years.

Wildfowl and Wader Counts, WWT and BTO. Various years.

ANNEX I

Feature (SPA) – Wintering waterfowl

* = primary attribute. One failure among primary attribute = unfavourable condition
# = Optional factors – these can be in unfavourable condition without the site being in unfavourable condition

Attribute	Measure	Targets	Comments
*Redshank wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
*Great Crested Grebe wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.

Non-avian factors

Attribute	Measure	Targets	Comments
* Habitat extent	Area of natural and semi-natural habitat	Maintain the area of natural and semi-natural habitats used by notified species, within the SPA, subject to natural processes.	Monitor once every reporting cycle by aerial photography.
# Habitat extent	Extent of other habitats	Maintain the extent of main habitat components subject to natural processes	Evaluate habitat quality should bird populations decline due to on site factors. Map any changes in area. This may include mapping areas with different vegetation structures where this would lead to different usage by notified species.
# Roost sites	Location of roost sites	Maintain all locations of roost sites.	Map roost site locations. Visit once every reporting cycle to ensure sites are available

ANNEX II

Feature (ASSI)

* = primary attribute. One failure among primary attribute = unfavourable condition
# = Optional factors – these can be in unfavourable condition without the site being in unfavourable condition

Attribute	Measure	Targets	Comments
Maritime cliffs and slopes			
*Morphological naturalness (extent, mobility and physical structure)	Ensure that any loss in extent and change in system dynamics is only due to natural processes	No human induced developments impacting on the natural system or constraining it. Maintain the range of physical conditions arising from variation in geology and geomorphology, profile, stability, degree of maritime exposure, drainage, aspect, geographical location and history of management.	Impossible to precisely measure extent of each NVC type, many are represented. The detailed fluxes between communities which is likely to happen is beyond the scope of condition assessment.
Sward Structure:	Litter in a more or less continuous layer, distributed either in patches or in one larger area. This dense thatch-like material. Estimate % in 2x2.	<10%	Outside target indicates insufficient grazing. (See comments on grazing below)
Sward Structure:	Bare ground or sand **not rock** extent, noticeable without disturbing the vegetation.	<5%	Bare patches are the natural result of localised herbivore activity especially rabbit burrows. Such areas provide niche for more ruderal species.
Sward Composition:	Grass:Herb ratio	40 - 90% herbs	
*Vegetation –maritime rock crevice and cliff ledge communities.	At least 4 of the species below recorded as occasional: **Armeria maritima, Silene vulgaris maritima, Festuca rubra**,	Maintain maritime rock- crevice and cliff- ledge communities – i.e. MC1c	Individual sites will exhibit different patterns and range of of vegetation types depending on site characteristics Surveys may be needed to establish the full range for

(Where present on a site)	Spergularia rupicola, S. maritima, Daucus carota, **Plantago coronopus, P. maritima**, Sedum anglicum and **orange Xanthoria lichens**	and MC5c.	each site.
*Vegetation composition sea-bird cliff communities. (Where present on a site)	At least 3 of the species below recorded as occasional: Festuca rubra, Matricaria maritima, Beta vulgaris maritima, Atriplex prostrata, Stellaria media, Rumex acetosa, Holcus lanatus and Atriplex hastata	Maintain range of sea-bird cliff communities - i.e. MC6 and MC7.	Individual sites will exhibit different patterns and range of vegetation types depending on site characteristics. Surveys may be needed to establish the full range for each site.
*Vegetation composition maritime grassland communities. (Where present on a site)	At least 6 of the species below recorded as occasional: Alchemilla spp, Carex flacca, Small sedge spp, Campanula rotundifolia, Primula vulgaris, Euphrasia vulgaris, Thymus polytrichus, Galium verum, Ranunculus bulbosus, Linum catharticum, Koeleria macrantha, Lotus corniculatus, Polygala sp, Potentilla erecta, Succisa pratensis, Pilosella officinalis, Veronica officinalis.	Maintain range of maritime grassland communities – i.e. MC8, MC9a, MC9c, MC9d, MC9e (including non-maritime forms of these).	Individual sites will exhibit different patterns and range of vegetation types depending on site size, history, substrate and patterns of human use. Surveys may be needed to establish the full range for each site.
*Vegetation composition-maritime heath communities. (Where present on a site)	At least 3 of the species below recorded as occasional: Festuca ovina, Plantago maritima, Lotus corniculatus, Scilla verna, Calluna vulgaris, Thymus praecox, Potentilla erecta. Record species composition at selected sample points across site.	Maintain range of maritime heath communities – i.e. H7a and b and H10d	Maritime heaths can show some affinities with lowland heaths in relation to quality. Reference should be made to the appropriate guidance for dry heaths, taking into account the maritime influence and the effects of exposure and slat deposition as factors affecting growth rates and succession in.
*Vegetation of soft cliffs and other communities. (Where present on a site)	Ensure that the general distribution of communities is broadly maintained	Maintain range of transitions and other communities – the area is notable for the significant range of NVC communities.	Aerial photographs will pick up spread of scrub and bracken. The NVC survey is unlikely to be repeated but revisit of condition assessment points will pick up changes. This is probably a site where more detailed work should also be carried out.
Vegetation Structure	Sward height 4 – 12 cm during summer	Maintain short sward in areas of	It is clear from discussion with the site manager for

	(July/August) over 65% of the area	species-rich vegetation * This to be assessed in conjunction with other short, species-rich grassland communities, including SD8	Killard, that over the past number of years due to a variety of mitigating circumstances including the Foot and Mouth outbreak of 2001, that the winter grazing hasn't been as consistent as usual. This has already been rectified and the 2003/04 winter grazing of the site is already complete at the time of writing (Jan 04).
Vegetation negative indicators	Ensure that the more species-rich elements of the cliff vegetation are maintained Aerial photography to record maximum extent of scrub, bracken, etc.	No further increase in bracken, scrub, rank grasses, ruderal species (Thistles, Nettle etc).	Changes in the extent and cover of invasive species usually indicate a change in conditions on a site, often as a result of anthropogenic activities which may promote rapid expansion or increase in cover. These are often initiated by changes in management. Some tall ruderal communities may be present naturally on a cliff site.
Invertebrates			
Invertebrate assemblage	To be finalised	To be finalised	To be finalised
Ornithological			
Turnstone wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Cormorant wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Shelduck wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.

Mallard wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Scaup wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Eider wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Goldeneye wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Red-breasted Merganser wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Oystercatcher wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.

Ringed Plover wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Lapwing wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Knot wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Dunlin wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Black-tailed Godwit wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Curlew wintering population	Bird numbers	No significant decrease in population against national trends	Five year running averages will be used to monitor population trends through WeBs data. Decline to a level below the Common Standards Monitoring baseline over a five year period may indicate unfavourable condition of the site.
Earth Science			

Cultra - Craigavad Carboniferous stratigraphy		Maintain the extent of exposures and access to them subject to natural processes	
Grey Point - Horse Rock Lower Palaeozoic stratigraphy		Maintain the extent of exposures and access to them subject to natural processes	
Cultra Permian stratigraphy		Maintain the extent of exposures and access to them subject to natural processes	