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Natural England's approach to assessing and responding to wildfowling notices on Sites of Special Scientific Interest (SSSIs) and European sites

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Natural England's approach to assessing and responding to wildfowling notices on Sites of Special Scientific Interest (SSSIs) and European sites

Introduction to the paper

The purpose of this paper is to provide a guide for Natural England staff to assess the potential impacts of wildfowling on SSSIs, Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The guidance will be utilised by all staff dealing with wildfowling notices for both coastal and inland sites. Staff within the wildlife licensing unit should also follow the guidance where the proposal is determined to have direct or indirect likely significant effect on European site interest features.

The paper sets out an approach which is determined to be best practice for most sites in relation to the potential impacts of wildfowling and the data currently available to Natural England staff. If other relevant data is available for a particular site and/or particular species, then local staff will be in the best position to determine how to include this in their evidence base, thus ensuring that the best available scientific data is utilised.

The level of information required from wildfowlers, both clubs and individuals, to enable Natural England to reach a reasoned conclusion on the impacts of the proposal is defined and a standard notice and returns form is included. The potential impacts to be considered throughout the Habitat Regulations Assessment are also discussed along with data requirements and methodology. A table has been provided in section 7.9 to enable staff to plot the results of their analyses against the wildfowling proposal – ie maintaining the status quo, decreased wildfowling, increased wildfowling or shooting a new area. Examples of how the table should be used in an appropriate assessment are given in Appendix two.

The proposed methodology is likely to be time consuming, however Natural England are the competent authority¹ in England for consenting wildfowling on European sites and therefore we must ensure that we meet our legal duties as set out in the

¹ A competent authority includes any statutory body or public office exercising legislative powers, whether on land or at sea.

Habitats Regulations. Staff should be mindful that their decisions and supporting analyses could be subject to legal scrutiny.

This guidance was produced following extensive consultations with regional and national staff, and with representatives from BASC (British Association for Shooting and Conservation). This approach was developed to ensure that a consistent approach is taken across the organisation when dealing with wildfowling notices and all other plans and projects assessed under the Habitat Regulations. This will ensure that any decisions are robust and informed by the best available scientific evidence.

1 Natural England's position on wildfowling

Natural England recognises the sustainable harvesting of quarry wildfowl through controlled wildfowling as a legitimate use of a wildlife resource.

Wildfowling affects waterbirds both through direct mortality and as a result of disturbance which can affect not only those birds being hunted, but also birds feeding and roosting nearby, including non-target species. Direct mortality due to wildfowling is not an issue of nature conservation concern if carried out at a sustainable level.

Disturbance as a result of wildfowling activity is of more concern as it has the potential to affect much larger numbers of birds than the relatively small number shot, including rarer and protected non-quarry species. Disturbance can result in lost foraging time as birds seek alternative feeding areas and can cause increased energy expenditure due to increased flight activity. Such effects are most likely to be detrimental in harsh weather conditions or when high numbers of birds are restricted to small patches of suitable habitat.

It is important to recognise that disturbance can have a wide range of consequences, from minor changes in bird behaviour to major changes in distribution. Short-term effects of shooting disturbance, which result in temporary displacement, generally have no detrimental effect on bird populations at a site level. However, more frequent disturbance might cause some parts of a site to support fewer birds than would be the case in the absence of disturbance. Furthermore, frequent disturbance by wildfowling and other activities, such as recreational access, may reduce waterfowl population levels. It may be possible to mitigate these effects of shooting disturbance by putting management measures in place. Although there is much evidence of disturbance effects from shooting, there is no clear evidence of population impacts due to wildfowling alone, but as part of the Habitat Regulations assessment it is necessary to also consider in-combination effects.

In addition to direct mortality and disturbance effects of wildfowling, a range of other activities potentially associated with wildfowling such as use of vehicles, vegetation

management, creation and management of flight ponds and supplementary feeding may also have effects upon birds, other species and habitats some of which may be beneficial.

2 Summary of the statutory framework

2.1 SSSIs are notified by Natural England by reason of their flora, fauna or geological or physiographical features. The notification papers for each site include a list of operations that require the written consent of Natural England before they can be carried out. Before carrying out such an operation, the owner or occupier of a SSSI must give notice to Natural England of their intention to do so. In response to that notice, Natural England may consent to the operation as proposed, consent to it subject to conditions or refuse consent. If consent is refused, subjected to conditions or Natural England fail to respond within four months, or in certain circumstances an agreed extended period the applicant has the right of appeal. (If the area team considers that a consent needs to be refused or conditioned, the Protected Sites – Regulation and Enforcement Team must be informed as soon as possible and the Non-Financial Scheme of Delegation followed).

2.2 Natural England has a duty to take reasonable steps, consistent with the proper exercise of its functions, to further the conservation and enhancement of the features by reason of which a SSSI is of special scientific interest. Natural England should only grant consent to an operation where it is compatible with the conservation and enhancement of the special interest of the SSSI.

2.3 Some SSSIs, and many of those on which wildfowling activities take place, are also classified as either a Special Protection Area (SPA) under the Birds Directive (2009/147/EC) and/or a Special Area of Conservation (SAC) under European Habitats Directive (92/43/EEC). These sites, which form part of the Natura 2000 network of Europe-wide sites designated and protected for their nature conservation interest, are subject to the provisions of the Habitats Directive. That Directive makes provision for an assessment and decision-making process where a competent authority must decide whether or not to grant permission for a plan or project that may affect such a site.

2.4 That process, which is required to be followed where the site is a European site, is transposed into UK law by the “The Conservation of Habitats and Species Regulations 2010” (as amended) (the “Habitats Regulations”). As a matter of government policy, the Habitats Regulations also apply to Ramsar sites.

The Habitat Regulations require that prior to giving consent to an operation that is, or forms part of a plan or project that is not directly connected with or necessary to the management of the European site and is likely to have a significant effect on it, either alone or in combination with other plans or projects, the competent authority must make an appropriate assessment of the implications for the site in view of the site’s conservation objectives. When dealing with wildfowling activities on a SSSI in

England, Natural England is the competent authority in terms of determining any notices and may only give consent for the operation after having ascertained that it **will not** adversely affect the integrity of the site.

2.5 Although, the term plan or project is not defined within the Habitat Regulations it should be given a broad meaning. A good working definition is;

“any operation which requires an application to be made for specific statutory consent, authorisation, licence or other permission.”

This interpretation has also been endorsed by a recent UK Court judgement² .

It is Natural England's view that wildfowling notices can be judged to be a plan or project using this definition, for which the likelihood of significant effects cannot be excluded on the basis of objective information.

Where the wildfowling activity proposed in a notice is likely to have a significant effect on a European site, Natural England must make an appropriate assessment of its implications for that site. The Habitats Regulations state:

Notification of potentially damaging operations

19.—(1) This regulation and regulations 20 to 22 apply where a notification is in force under section 28(a) of the WCA 1981 (sites of special scientific interest) in relation to land which is or forms part of a European site.

Supplementary provisions as to consents

21.—(1) Where it appears to the appropriate nature conservation body that an application for consent under regulation 20(2) (a) relates to an operation which is or forms part of a plan or project which—

- (a) is likely to have a significant effect on a European site (either alone or in combination with other plans or projects), and*
- (b) is not directly connected with or necessary to the management of that site,*
they must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.

(2) In the light of the conclusions of the assessment, they may give consent for the operation only after having ascertained that the plan or project will not adversely affect the integrity of the site.

(3) This regulation does not apply in relation to a site which is a European site by reason of regulation 8(1) (c) (site protected in accordance with Article 5(4) of the Habitats Directive).

² 2010 EWHC 232
CO/1834/2009

The European Court of Justice has interpreted the requirements of the relevant part of the Habitats Directive. The key points are:

- a precautionary view should be taken of the question of the likelihood of significant effect. If the likelihood of a significant effect, either alone or in combination with other plans or projects cannot be excluded on the basis of objective information then an appropriate assessment **must** be made;
- in making the appropriate assessment, all aspects of the plan or project which can, either individually or in combination with other plans or projects, affect the conservation objectives of the site must be identified on the basis of the best scientific information in the field;
- a competent authority, taking account of the conclusions of the appropriate assessment, may give consent to the plan or project only if they have made certain that it will not adversely affect the integrity of the site; that is where no reasonable scientific doubts remain as to the absence of such effects.

2.7 Conservation Objectives

When considering a proposal, consideration needs to be given to the conservation objectives for the site. Conservation Objectives are provided for all designated sites and define the desired state for each of the features for which they have been designated. Conservation objectives for birds are aimed at maintaining or restoring bird populations, and/or the diversity of species within defined assemblages, both through the protection of the habitats supporting them and management against the negative impacts of disturbance.

The Conservation Objectives and definitions of favourable condition for features on an SSSI may inform the scope and nature of any 'appropriate assessment' under the Habitats Regulations. However, the Conservation Objectives do not by themselves provide a definitive basis on which to assess plans and projects as required under Regulations 21-23, 27, 61-63 and 68 – 107. An appropriate assessment will also require consideration of issues specific to the individual plan or project, including the location, size and significance of the proposed project along with both direct and indirect impacts.

Following an appropriate assessment, competent authorities are required to ascertain the effect on the integrity of the site. The integrity of the site is defined in paragraph 20 of Office of the Deputy Prime Minister Circular 06/2005 (ODPM, 2005) as;

the coherence of its ecological structure and function, across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

3 The proposal

3.1 In order for Natural England to be able to identify all the potential impacts of a proposal and assess the effects of these on a designated site, a certain level of information is required. Where the activity is solely within a SSSI and not a SAC or SPA, Natural England's primary duty is under section 28G of the Wildlife & Countryside Act 1981 (as amended), namely:

...to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest.

For activities solely on a SSSI the notice of proposal must be received from a properly notified owner/occupier and clearly set out what is proposed, where and the level of activity, so that Natural England can form a clear view about the proposal's implications for the special features of the site.

Where the proposed activity on a SSSI is also on or near a SPA and/or a SAC, both the Wildlife & Countryside Act 1981 (as amended) and the Habitat Regulations apply and therefore, Natural England can **only** issue a consent where a conclusion of no adverse effect on the integrity of the site has been reached. In this instance it is likely that a greater level of detail from the applicants will be required to enable Natural England to reach a reasoned conclusion. If insufficient detail is given, the Notice may be treated as invalid and more information about the proposal may be requested.

3.2 Essential information which should be provided for **all** wildfowling notices on a designated site includes:

- area over which the activity is proposed to be carried out (including a map);
- number of years consent is sought for;
- maximum number of visits per season (a visit is determined to be one person with one gun at one time of day ie dawn or dusk or one tidal flight unless specifically stated)
- historic bag returns on European sites, if available
- type of wildfowling – i.e. shoulder gun or punt gun if the proposal is new and has not been previously shot.

3.3 Desirable information may include:

- type of wildfowling – ie shoulder gun or punt gun if the area has been previously shot.
- intended quarry
- historic bag returns on SSSIs, if available

- any restrictions on the number of simultaneous visits and/or the number of days that wildfowling may take place (e.g. it is illegal on Sundays in some counties);
- details of additional activities such as vegetation management, supplementary feeding, vehicular access
- presence and location of any no shooting zones or refuges managed for minimal disturbance, in **some instances this information may be deemed essential**. Additional guidance on refuges can be found in Appendix 5.

This information should be submitted on a standard notice form provided at Annex 3 along with a standard returns form, available from the Protected Sites - Regulation and Enforcement Team. Clubs and individual wildfowling should be encouraged to use these forms to ensure consistency

3.4 Once a notice has been received by Natural England it should be acknowledged within 10 days and a named adviser allocated by the relevant team leader. A substantive response should be provided within 28 days of the notice being received if the proposal is straight forward and the area has been previously shot. However, in some instances this will not be achievable due to the complexity of the site or problems accessing data but even in these circumstances the statutory period for response to a notice of four months should be adhered to. If negotiations take place and a modified notice is received every effort should be made to adhere to the original four month period unless in exceptional circumstances where an extended response date should be agreed in writing with the applicant as the earliest opportunity.

4 Likely significant effects

The significance test is a coarse filter intended to identify which proposed plans and projects should be subject to the formal appropriate assessment. Consideration of 'likely significant effect' will have practical and legal consequences and must be based on sound evidence judgement and bear scientific and expert scrutiny. Likely significant effect (LSE) is, in this context, any effect that may reasonably be predicted as a consequence of a plan or project that may undermine the conservation objectives of the features for which the site was designated, but excluding trivial or inconsequential effects. In the context of the Habitats Regulations, the precautionary principle applies at the likelihood of significant effects stage in the same way that it applies to any other stage

It will be necessary to look at the nature of the effect and its timing, duration and reversibility, taking into account any robust readily available information on the site. The likely scale of impact is also important. In some cases the decision that no significant effect is likely will be obvious. Very short lived impacts would generally require only minimal further consideration under such conditions, provided there were no persistent, cumulative effects from repeated or simultaneous impacts

of the same nature. An “in-combination” assessment may also be required at the LSE stage. If the potential effects of the proposed project are not judged to be significant alone, then they should be considered in-combination with other plans or projects.

4.1 The two key effects that require consideration are:

Harvesting of SPA species. In the UK, there is no existing evidence that waterfowl populations have been reduced by harvesting, and figures given in bag returns generally indicate that the numbers of birds shot are unlikely to result in an adverse effect on the integrity of a site. However, this will have to be determined on a case by case basis, taking into consideration the status of the species concerned.

Disturbance of SPA species due to gun fire, the presence of wildfowling and the use of gun dogs. In the UK, there is no evidence that waterfowl populations have been reduced by shooting disturbance; however it can cause both quarry and non-quarry waterfowl to change their behaviour and distribution within and between sites. The interpretation of changes in WeBS data may reveal such effects.

Consideration should also be given to whether there are any impacts on designated site habitats, for example through the use of vehicles or access routes onto and across the site.

4.2 Where the proposal is to take place on a European site and is to carry out wildfowling on a regular basis, typically the frequency and pattern of visits will be such that Natural England will be unable to rule out the likelihood of a significant effect due to the need to apply the precautionary principle. Therefore, it is expected that in most cases a more detailed appropriate assessment will be required. However, there may be cases where some or all of the SPA qualifying features might be screened out at LSE stage, perhaps with a sub-set of features being taken through to the more detailed Appropriate Assessment stage.

For example, where there is no proposal to increase or change the previous wildfowling activity, it is not a new area for wildfowling and the species population trends are increasing or stable at both SPA and sector level, it is possible that this scenario might represent ‘no LSE’ alone, for those particular SPA features only. In these cases, a detailed Appropriate Assessment might not be required, unless there is information with regard to other plans/projects to suggest there may be an ‘in combination’ likely significant effect.

4.3 The LSE test must consider mitigation and avoidance measures which are set out in the notice and/or accompanying management plan. The case at Dilly Lane in Hampshire of Hart District Council v Secretary of State for Communities & Local

Government,³ established the principle that in the Habitats Regulations Assessment process, measures to reduce or avoid impacts upon a European site through mitigation or avoidance must be considered at the LSE stage, neutralising a likely significant effect test and therefore removing the need for an appropriate assessment.

It may be, with appropriate safeguards, that a conclusion of 'No LSE' can be made with no requirement for a detailed Appropriate Assessment. Types of mitigation for wildfowling proposals might include: additional provision of refuges, restriction on number of visits, rest periods (i.e. periods during the season when there is no shooting), spatial and/or temporal restrictions around high tide roosts or refuges. Where mitigation measures are considered essential to reach a conclusion of 'No LSE', these should be fully discussed with the proposer of the activity and included in the Notice signed by the proposer. An alternative route to assure the mitigation measures would be to use a condition attached to the consent but this should be avoided if possible due to the possibility of appeals.

4.4 If it has been ascertained that there are effects of the plan or project but which are not significant alone, the plan or project must then be considered for any potential likely significant effects that may arise in combination with other plans and projects. If a LSE in-combination is identified, then the project must go through to the Appropriate Assessment and the assessment is done in combination.

The information provided below on carrying out an appropriate assessment is given as a guide to staff, explaining the methodology which is determined to be best practice and therefore should be used when undertaking the assessment.

For European sites a record must be made of the all Habitats Regulations Assessments (HRA) of notices for SSSI consent using the Regulation 21 HRA Form, this includes the Likely Significant Effect step of the process. The form, guidance on filling it in and detailed information on the HRA process can be found at: <http://neintranettechnical/content/technical/topics/wiki.asp?ID=64&PG=856>

5 The appropriate assessment

5.1 This assessment must be made on the basis of the best scientific information reasonably available. It should use the information set out above (3.2 and 3.3) detailing the proposal and the parameters to be assessed. These should be considered together with any other available information on which to assess the predicted effects of the proposal, such as historic data relating to the activity and the site, and expert opinion taking into account local knowledge. Encouraging wildfowling to complete the standard notice and returns form will ensure consistency

³ 2008 EWHC 1204
CO/7623/2007

between sites and regions when asking for information to carry out appropriate assessments, although it is recognised that additional information may need to be requested on some sites. Wildfowling on foreshore leased from the Crown Estate will already provide information in a consistent form by using standard wildfowling return forms/annual wildfowling return report approved by the Joint Tidal Group. (The JTG comprises representatives from Natural England, the other country agencies, the Crown Estate and the British Association for Shooting and Conservation).

5.2. Setting the appropriate assessment within a wider context

There is evidence that wintering waterbird population trends (numbers and distribution) can be influenced by wider, non-site based factors, for some species on some sites. For example, it is accepted and documented in peer-reviewed literature that some wintering waders and geese are undergoing northerly and/or easterly range shifts to their wintering areas; sometimes referred to as 'short-stopping' (Maclean *et al.* 2008).

There are also changes occurring to breeding productivity and output for some of 'our' wintering waterbirds that breed in Arctic areas, thought to be related at least in part, to climate change. This can also influence the numbers of birds passing through and wintering on our wetland SSSIs and SPAs.

These off-site, wider influences can be reflected in changing trends for those species thought to be affected.

Population dynamics are influenced by a number of variables, sometimes inter-related, both on and off site. It is not the purpose or aim of the Appropriate Assessment to unpick those variables at any detailed level. However, keeping in mind the wider context of the population trend can help predict the future trend for that species (numbers and/or distribution).

It is worth noting that some British wintering waterbirds have shown increasing trends as a result of wider climate change related factors, for example, Icelandic breeding black-tailed godwits (*Limosa limosa islandica*). Where these upward trends are occurring, anthropogenic site-based influences should not be jeopardising the ability of the site to accommodate the increasing numbers.

5.2.1. How do I decide which of the qualifying species on the SPA might be affected by wider, climate-change factors?

There are some easily accessible resources available to guide these considerations and specialist ornithological advice can also be sought.

(i) The State of the UK's Birds 2012 (Eaton *et al.*, 2012)

This leaflet provides useful background information about the current status and national trends for wintering waterbirds (and also rare/common breeding birds and breeding seabirds), with some general information about how some species might be affected by climate change. It is updated annually.

http://www.rspb.org.uk/Images/SUKB_2012_tcm9-328339.pdf

(ii) Waterbirds in the UK (WeBS annual reports) (Holt *et al.*, 2012)

The species accounts in the WeBS annual reports, latterly called 'Waterbirds in the UK' (all freely available online) sometimes describe where it is thought that wider climate change related factors are influencing population change. These narratives may also include additional useful information, for example, related to specific SPAs or evidence for cold weather movements.

<http://www.bto.org/volunteer-surveys/webs>

Example: European white-fronted goose *Anser albifrons albifrons*

Reproduced from 'Waterbirds in the UK, 2010/11 – The Wetland Bird Survey' (Holt *et al.*, 2012)

Much has been written in past WeBS reports about how the steady decline in numbers of wintering European white-fronted geese in Britain is at least partly attributable to short-stopping, in response to milder winters conditions further east in north-western Europe. This distributional shift in core wintering range has resulted in an associated increase in wintering numbers in The Netherlands. In view of this trend, cold weather events might be anticipated to result in an opposing response, and 2010/11 was no exception. A marked influx was noted across eastern England during the frozen conditions that affected much of north-west Europe, yielding a British monthly maximum of 3,087 birds in January 2011.

(iii) WeBS Alerts reports

WeBS Alerts reports provide information relating to population trends of waterbirds and are freely available online. These have been produced for the majority of SPAs and some SSSIs (Thaxter *et al.*, 2010) and the link to the page below gives an introduction. The species and site accounts can sometimes be used to provide an indication as to the relative weight of influence on the population coming from wider broad-scale factors and local site-based factors. WeBS Alerts site reports and species accounts do not generally provide a detailed level of evidence as to what type of site-based factors are influencing the population decline. Local knowledge (from within Natural England, external partners and customers including wildfowling clubs and individuals) will often be required for these considerations.

<http://www.bto.org/volunteer-surveys/webs/publications/webs-alerts>

Example: Dee Estuary SPA
Reproduced from

Assessing & responding to wildfowling notices on SSSIs and European sites

Authors: Emma Hawthorn, Kate Jennings, and Tim Frayling

Content owner: Sue Beale

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Teal *Anas crecca* a medium Alert has been issued for the medium and short term. *This pattern is superficially similar to the trends in the WeBS regional and national totals, except that countrywide numbers continued to increase until the turn of the century. Consequently, it would appear that the recent dip in numbers associated with these Alerts has been driven by broader-scale change and there is nothing to indicate that site specific pressures may be involved.*

Oystercatcher: a high Alert has been issued for the long term and a medium Alert since designation.

This trend contrasts with those for the WeBS regional and national totals that have remained relatively stable other than for a slight dip over the most recent winters.

This would suggest that the decline underpinning these Alerts has been driven by site-specific pressures which first came to bear during the early 1990s. More recently this may have been augmented by broader-scale change.

5.2.2 How do I use this information in the Appropriate Assessment?

It could be argued that, whatever the reason for the population decline, any additional pressure or stress on that declining population will be of concern. This is discussed in European guidance that includes the following paragraph:

Bird species may be considered as having an unfavourable conservation status when the sum of influences acting on the species concerned negatively affect the long-term distribution and abundance of its populations. This would include a situation where population dynamics data shows that the species is not maintaining itself on a long-term basis as a viable component of its natural habitats. It is, of course, generally not advisable to subject such species or populations to hunting, even if hunting is not the cause of or contributing to their unfavourable conservation status. However, allowing hunting of a species can provide a strong incentive to manage habitats and address other factors contributing to population decline, therefore contributing to the objective of restoring populations to favourable conservation status.

Reproduced from *Guidance document on hunting under Council Directive 79/409/EEC on the Conservation of Wild Birds 'The Birds Directive'* (December 2008)

Also, predictions and scenarios relating to climate change are generally at international or national level and it is not always known how these will manifest at individual site level, which is usually the level at which an Appropriate Assessment is undertaken.

The concept of maintaining the integrity and resilience of the network of SPAs to provide suitable protected areas across a range of future climatic and weather conditions is crucial. This has been illustrated during periods of severe weather in

recent winters, where some species showed short-term population increases against a backdrop of a longer-term population decline.

However, balanced against this is a requirement to consider the past and future likely trend for the qualifying species, which might be predicted to occur in the theoretical absence of any site-based influences.

Changes in population abundance or distribution that can be solely (or largely) related to climate change influences are generally considered to be 'natural change'. However, considerations related to whether site-based influences are also playing a role should be included in every Appropriate Assessment, irrespective of wider influences.

Natural England is currently reviewing the way we produce Conservation Objectives for European sites (SPAs and SACs). Information is available on our external web site at <http://www.naturalengland.org.uk/ourwork/conservation/designations/sac/conservationobjectives.aspx>.

As a competent authority for the consideration of wildfowling Notices, Natural England will undertake Habitats Regulations Assessments with reference to new Conservation Objectives as more detailed versions become available for specific features on named SPAs.

5.3 In order for consent to be given, the appropriate assessment must be sufficiently rigorous and proportionate to the activity to allow a conclusion to be reached, beyond reasonable scientific doubt, that the proposal will not adversely affect the integrity of the site.

6 Appropriate assessment - removal of SPA quarry species

Appropriate assessment – direct mortality of SPA quarry species

Determining whether the direct mortality, through shooting of SPA quarry species is likely to adversely affect the integrity of the site requires a comparison of historic bag returns with the number of birds using the site.

For the majority of SPAs, an absolute population figure giving the total number of a particular bird species using the site, through the winter period, is not readily or reasonably available in the evidence base.

WeBS count data provide a snapshot of the numbers of birds using the counted areas of a site (sector or summed for the SPA) at any one moment in time and these data are used to produce an index of species population change (trends) over time.

WeBS data are also used as a proxy for population figures and feed into SSSI, SPA and Ramsar site designation processes. As such, WeBS counts represent the best, reasonably available evidence base for both designating SPAs and Ramsar sites and considering the potential for adverse effects on site integrity via direct mortality of quarry species.

It is acknowledged that there are limitations with using WeBS data for these purposes, because there is no indication of 'bird turnover' rates i.e. how many actual birds are using the site through a specified time period (in this case, winter) and how long they stay. This means that WeBS core count data, when used as a proxy for population numbers, will be likely to underestimate the total numbers of waterbirds using the site and possibly overestimate the proportion shot.

There are sophisticated methodologies and statistical and modelling techniques emerging in the evidence base, which may be able to provide more robust data on the total numbers or 'volume' of bird species using a site over time (Atkinson *et al.*, 2007). However, these studies are time-consuming, complex and expensive to undertake and unlikely to be reasonably available evidence for the task of considering wildfowling Notices at this time.

For the purposes of this guidance, it is therefore recommended that the bag return data are compared with the WeBS count data, across the same time period to give an indication only of the removal of the SPA 'population' through direct mortality.

Due to a range of factors including natural fluctuations in bird populations, differences in annual productivity between species and bird count limitations as described, it is not possible to specify the maximum percentage take which would constitute 'no adverse effect on site integrity' for all cases.

Generally, direct mortality due to wildfowling is unlikely to cause a population decline. However, if an apparently high proportion of a particular species is taken annually, and the SPA population is in decline, then it may be necessary to consider restricting the numbers taken.

As a **guide only**, where greater than 1% of the SPA 'population' is removed, further site-specific consideration is likely to be required. This will include looking at the bird population trends at both sector and whole SPA level – as described in other sections of this guidance and with reference to the Table of 'possible scenarios' in Section 7.5.

For where historic bag returns only indicate the total bag i.e. the data are not species specific, this can then only be compared with the total number of the combined populations of the SPA quarry species using the site (non quarry species numbers should not be included). It may be possible to request further details from the applicant regarding which quarry species are shot to ensure that this assessment is as accurate as possible. Where previous returns only indicate total bag, advisors

should request clubs to specify in future that bag returns must record the species shot.

7 Appropriate Assessment - Disturbance

7.1 Introduction

When undertaking the assessment it is important to be objective and consistent in application across sites, as well as being transparent to those it might affect. Staff should have regard to the European Commission guidance [Managing Natura 2000 sites - the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC](#) (EC, 2000). Natural England has to be consistent with the European Court of Justice judgement on the Waddenzee – namely that a plan or project may only be authorised once the competent authority have made certain that it will not adversely affect the integrity of the site; that is where no reasonable scientific doubts remain as to the absence of such effects.

The naturally fluctuating nature of bird abundance and distribution and the numerous forms of disturbance to which they can be subjected, makes it challenging to ascertain whether disturbance attributable to wildfowling, or in-combination with other plans or projects, is significantly affecting populations. Nevertheless, a range of information can be used to inform consenting of the activity and the above European Commission guidance (EC, 2000) provides information on what constitutes disturbance of species in particular in Section 3.6.2 below;

3.6.2. Disturbance of species

Contrary to deterioration, disturbance does not directly affect the physical conditions of a site; it concerns the species and it is often limited in time (noise, source of light, etc.). The intensity, duration and frequency of repetition of disturbance are therefore important parameters.

In order to be 'significant' a disturbance must affect the conservation status. The conservation status of a species is defined in Article 1(i) (see Section 2.3).

In order to assess whether a disturbance is significant in relation to the objectives of the directive, reference can be made to the definition of the **favourable conservation status of a species** given in Article 1(i), on the basis of the following factors.

- *'Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable element of its natural habitats'*

Any event which contributes to the long-term decline of the population of the species

on the site can be regarded as a significant disturbance.

- ‘The **natural range** of the species is **neither being reduced** nor is likely to be reduced for the foreseeable future’

Any event contributing to the reduction or to the risk of reduction of the range of the species within the site can be regarded as a significant disturbance.

- ‘There is, and will probably continue to be, a **sufficiently large habitat** to maintain its populations on a long-term basis’.

Any event which contributes to the reduction of the size of the habitat of the species within the site can be regarded as a significant disturbance.

Article 6 (2)

Disturbance of a species occurs on a site when the population dynamics data for this site show that the species could no longer constitute a viable element of it in comparison to the initial situation. This assessment is done according to the contribution of the site to the coherence of the network.

7.2 What to include in the Appropriate Assessment

Judgements on the level of disturbance attributable to wildfowling should take into account the number of visits and any restrictions on simultaneous visits and/or days within the wildfowling season.

Site specific factors should also be taken into account. The following list is not exhaustive, but represents the types of locally derived information that would aid assessments.

- Changes to habitat extent and quality within a given sector/site that might influence bird abundance/distribution. Consider the timescale over which this has occurred in relation to the population trends and whether this is due to changes in management and/or natural change?
- Presence of high tide roost sites and proximity to wildfowling activity (that might require specific safeguards through mitigation considerations).
- Presence of important low tide feeding areas and proximity to wildfowling (i.e. those areas that hold larger numbers/proportion of the SPA species population or assemblage)

- Presence of refuge or no-shooting areas within the proposal area and the SPA as a whole (see Appendix 5 for further guidance regarding refuges)
- Whether there is any morphological, habitat or man-made features within the sector that might act as natural barriers or have a sheltering effect between the wildfowling and the areas most likely to be frequented by SPA bird populations. For example: creeks, flood defence banks, treelines, very remote mudflats, reedbeds or any other inaccessible areas not used/affected by wildfowling (and their dogs) but used by bird populations.
- Access routes to the areas where wildfowling is most likely to be undertaken (recognising that some wildfowling wish to keep specific locations confidential) and whether on foot and/or motorised access, including boats.
- Whether the majority of the wildfowling activity is likely to be shore-based or from boats/other vehicles (recognising that some wildfowling wish to keep specific locations confidential)

7.3 Which species to include in the Appropriate Assessment

The qualifying features of the SPA (species and assemblage) should be listed using the site's Conservation Objectives. These are available on Natural England's internet site at

<http://www.naturalengland.org.uk/ourwork/conservation/designations/sac/conservationobjectives.aspx>

The Habitats Regulation Assessment should also have reference to the Ramsar site (bird) features as a matter of Government policy.⁴

The notified features of the SSSI are also of relevance for assessment of effects at SSSI level. Where these differ, it is important to note that only the SPA qualifying features (species and assemblage) are subject to the Habitats Regulation Assessment.

From the list of SPA qualifying features, a consideration should then be made as to which are present in the proposed area in numbers and/or at a frequency most likely to require a detailed level of assessment via an Appropriate Assessment.

As a **guide only**, where the area affected by the proposed activity (which may be larger than shown on the map provided in the Notice) holds 1% of a SPA qualifying species population (Annex I and/or regularly occurring migratory species) these can be considered to be 'key species' to include in the assessment process.

For qualifying species populations occurring in low numbers, for example, non-breeding bittern or hen harrier, this 1% guide is not useful. For these species, where

⁴ Ramsar Sites in England: A Policy Statement DETR (November 2000)

there are records and/or habitats present in the area to reasonably suggest they may be present during the wildfowling season, then these species 'naturally' occurring in low numbers should also be included in the assessment process.

Where WeBS data at sector level are not available, or are incomplete, an examination of other data sources might be useful. For example, local records centre, bird club reports and records and land managers anecdotal evidence may also be used to identify SPA and/or SSSI species to include in the assessment process. Where alternative and/or less robust data sources are used, these should be treated with more caution and the assessment process should reflect this.

7.4 Population trends

Evidence from designated site specific studies relating to both direct mortality and disturbance effects of wildfowling is seldom available at individual SPA or SSSI site level (but refer to the Wildfowling Literature List in Appendix 6). The likelihood of an adverse effect on a SPA feature can instead be assessed by examining species (or assemblage) population change over the past 15 years (or time period when data availability allow) at whole SPA level, using WeBS core count data and WeBS Alerts reports.

For each of the species selected for analysis and mean numbers from the WeBS core counts for the winter periods (September to March inclusive, as routinely used for WeBS reporting) from the last 15 years should be graphed to identify the overall trends within individual sectors. These should be compared visually to trends for the same species for the whole site. Consideration should also be given to regional/national trends where possible, using WeBS Alerts reports.

To determine the comparative importance of the relevant WeBS sectors for each of the selected species, the mean number of individuals of each species within each sector should be calculated as a percentage of the whole site mean for each year and graphed. Guidance from the BTO is that mean numbers should be used rather than raw totals to reduce the impact of missing data. Examples of the graphs to be produced are shown in Appendix 1.

The SPA level assessment of trends can be compared with sector level trends (where data availability allow) to identify any inconsistencies between SPA and sector level population change at the scale where potential disturbance impacts from wildfowling are most likely to occur.

For example, the trends can be examined and compared to identify areas where species are declining, areas where species are declining contrary to, or in excess of trends for the site as a whole. Sectors that support an increasing proportion of a declining species population (i.e. gaining in importance) may also be identified. Habitat change should also be considered.

It is recognised that there may be limitations with the use of WeBS data. For example, the areas covered by the notice do not usually coincide with WeBS count sectors; or certain SPA species such as hen harrier and bittern will not be accurately covered by these counts. However, in most cases it is expected that the WeBS data will constitute the best available information for assessing impacts on the integrity of the SPA. If alternative or additional information is available, such as records of wintering bittern and harriers, or relevant local knowledge and information provided by partners and land managers including wildfowlers, then this can also be included. The assessment process and record should make the distinction between data collected by standard and robust methodologies (e.g. WeBS data) and anecdotal information – but both types of evidence can be used in assessments.

7.5 Possible scenarios as a result of the Appropriate Assessment

Table 1 below summarises possible scenarios following the analyses of the WeBS data. The purpose is to ensure consistency when dealing with wildfowling notices. However, it should be taken as a guide and it is recognised that case by case analyses may lead to alternative conclusions. All conclusions must be robust and informed by the best, reasonably available scientific evidence.

Each of the species selected for analysis should be plotted against the table together with the information on the importance of the sector for the species. It is possible that the species analysed may fall into different boxes within a column in the table (see Appendix 2). The final decision regarding the consent should therefore take into account the importance of the sector for the different species, the WeBS Alerts status, whether the species is a quarry species, the consistency between site and sector level populations trends and local knowledge such as the presence of high tide roosts within the sector.

Table 1. Possible scenarios to guide conclusions of adverse effect (AE) on site integrity and timescales for issuing consent (short and long)

Estuary/site population trend	Sector population trend	Wildfowling Levels	Species
		Status quo	
	Increasing	No AE Long	Tufted duck Shoveler
Increasing	Stable	Site specific Short	Gadwall
	Decreasing	AE further consideration	Lapwing Golden plover
	Increasing	No AE Long	Redshank Wigeon ⁵
Stable	Stable	No AE Long	
	Decreasing	AE further consideration	
	Increasing	No AE Long	Goldeneye Dunlin ⁶ Mallard ⁶ Pochard ⁶ Oystercatcher
Decreasing	Stable	Site specific Short	
	Decreasing	AE further consideration	

7.6 Explanation of terms used in the table

7.6.1 Site specific

The boxes within the table referring to site specific factors deal with situations where it is not possible to give generic guidance. There will need to be a consideration of site based factors (examples described in Section 7.2) before reaching a conclusion regarding adverse effect on site integrity. All conclusions must be robust and be clearly explained in the Appropriate Assessment.

7.6.2 Adverse effect, further consideration

⁵ BTO alerts report 2006 – taking into account winters up to 2004/05

⁶ BTO alerts update 2007 – taking into account winters up to 2005/06

This refers to circumstances where negotiating amendments to the notice or attaching conditions, such as refuges around important high tide roosts, may enable a conclusion of no adverse effect on the integrity of the designated site to be reached. However, in some cases this may not be possible and consent should be refused. Any conditioned or refused consents must first be discussed with the Protected Sites – Regulation and Enforcement Team.

7.7 In combination assessment

In order to undertake a thorough in-combination assessment, every effort should be made to quantify and assess the effects and likely impacts of other plans and projects with recreational and non-recreational disturbance factors on species' conservation status. It is important to ensure that only relevant 'plans' and projects' are included within an in combination assessment, and not every conceivable activity.

This information should enable wildfowling disturbance to be considered in relation to other forms of disturbance that may be present on the site.

The observed trends derived from WeBS data are the result of all factors (both on and off the site) influencing the SPA species utilising a particular area, whether they fall under the definition of a 'plan' or 'project' or not. It is difficult, if not impossible, to identify a cause and effect relationship between the trends and the influence from wildfowling alone.

The approach described in this guidance represents an in-combination assessment of the 'health' of the sector and the species it supports. By considering these data and the resultant trends alongside the information provided on the notice, locally derived information and knowledge and other significant causes of bird disturbance occurring within the relevant WeBS sectors, the potential impacts of the proposed wildfowling on the SPA can be considered alone and in combination.

7.8 Timescales

It is recommended that the timescales for consent stated in the table above should refer to a minimum period of 5 years⁷ (short) and a maximum of 10 years (long). This allows for flexibility depending on the case by case circumstances.

It is Natural England's view that if time limits are not provided on wildfowling notices, then advisors should encourage clubs to re-submit their notices with agreed time limits. If this cannot be achieved through negotiation, time limits can be conditioned on the consent. When assessing plans and projects on designated sites, it must be ascertained based on the best available data that the proposal will not have an adverse effect on site integrity before consent may be granted.

⁷ Unless the notice specifies a shorter time period

The WeBS data analysed in the Appropriate Assessment relate to and are derived from the past, albeit up to the very recent past. Natural England is confident that certain predictions can be made on the basis of these data – for example the level of wildfowling proposed will not have or contribute to an adverse effect within a specified timescale.

However, there is a limit to the predictive quality of historic data, especially in times of climate change, rising sea levels and changing land management and uses; and in the context of bird populations which may be affected by a multitude of other factors, both on and off site. It is therefore impossible to ascertain for how long all relevant factors will remain unchanged.

Consequently Natural England will not extrapolate trends more than 10 years into the future and, as such, all consents will have a maximum duration of 10 years.

8 References

Atkinson P., Choquet R., Frederiksen M., Gillings S., Pradel R. & Rehfisch M.M. (2007) *Towards developing thresholds for waterbirds that take into account turnover*. British Trust for Ornithology Research Report No. 463, a report for Natural England, Thetford.

Eaton M.A., Cuthbert R., Dunn E., Grice P.V., Hall C., Hayhow D.B., Hearn R.D., Holt C.A., Knipe A., Marchant J.H., Mavor R., Moran N.J., Mukhida F., Musgrove A.J., Noble D.G., Opper S., Risely K., Stroud D.A., Toms M. and Wotton S. (2012) *The state of the UK's birds 2012*. RSPB, BTO, WWT, CCW, NE, NIEA, SNH and JNCC. Sandy, Bedfordshire.
http://www.rspb.org.uk/Images/SUKB_2012_tcm9-328339.pdf

European Commission (2000) *Managing Natura 2000 Sites: The provisions of Article 6 of the Habitats Directive (92/43/EEC)*. European Commission.

European Court of Justice Case C-172/02 Waddenzee judgement

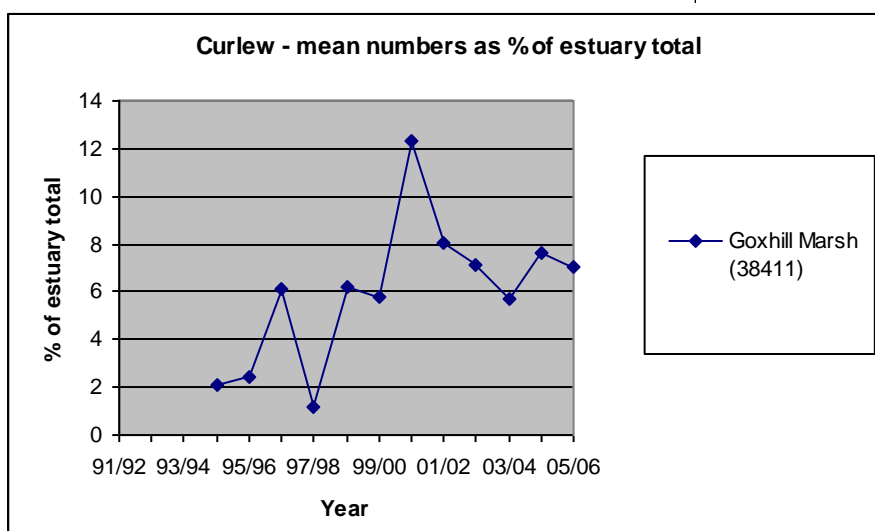
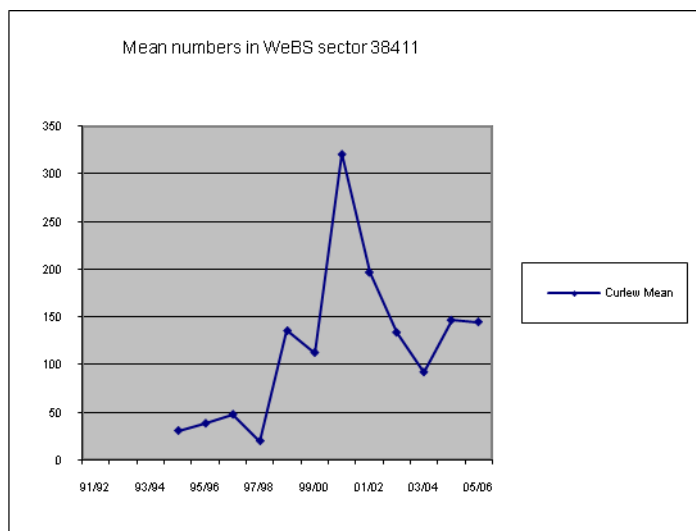
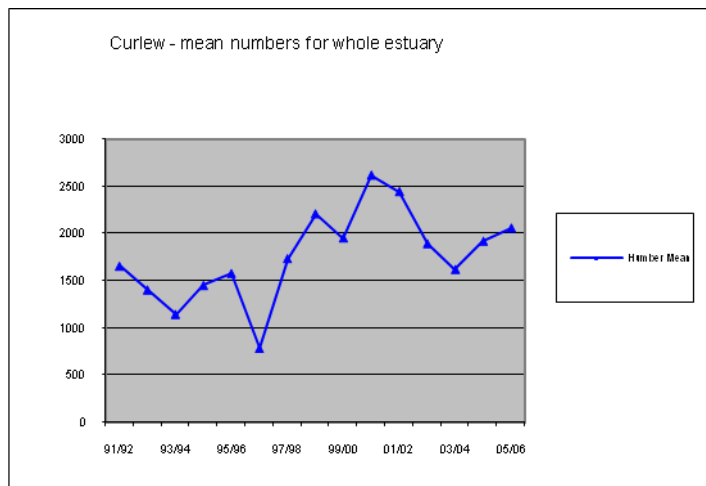
Holt C.A., Austin G.E., Calbrade N.A., Mellan H.J., Hearn R.D., Stroud D.A., Wotton S.R. and Musgrove A.J. (2012) *Waterbirds in the UK 2010/11: The Wetland Bird Survey*. BTO/RSPB/JNCC, Thetford.
<http://www.bto.org/volunteer-surveys/webs/publications/wituk-201011>

Maclean, I.M.D., Rehfisch, M.M., Delany, S. & Robinson, R.A. (2008). *The Effects of Climate Change on Migratory Waterbirds within the African-Eurasian Flyway*. BTO Research Report 486. BTO, Thetford.

Office of the Deputy Prime Minister (2005) *Government Circular: Biodiversity and Geological Conservation – Statutory obligations and their impact on the planning system*. (ODPM 06/2005). Office of the Deputy Prime Minister

Thaxter, C.B., Sansom, A. Thewlis, R.M., Calbrade, N.A, Ross-Smith, V.H., Bailey, S., Mellan, H.J. & Austin, G.E. (2010). *Wetland Bird Survey Alerts 2006/2007: Changes in numbers of wintering waterbirds in the Constituent Countries of the United Kingdom, Special Protection Areas (SPAs) and Sites of Special Scientific Interest (SSSIs)*. BTO Research Report 556. BTO, Thetford.
<http://www.bto.org/volunteer-surveys/webs/publications/webs-alerts>

Appendix 1.Examples of graphs produced for species analysis



Appendix 2. Examples of how to use the table in section 7.5 to analyse the possible impacts of a wildfowling notice

Example one

Table of possible scenarios to inform conclusions of adverse effect (AE) and timescales for issuing consent (short and long) Taken from 'Natural England's approach to assessing and responding to wildfowling notices on SSSIs and European sites'

Estuary/site population trend	Sector population trend	Wildfowling Levels	Species
		Status quo	
	Increasing	No AE Long	Tufted duck Shoveler
Increasing	Stable	Site specific Short	Gadwall
	Decreasing	AE further consideration	Lapwing Golden plover
	Increasing	No AE Long	Redshank Wigeon⁸
Stable	Stable	No AE Long	
	Decreasing	AE further consideration	
	Increasing	No AE Long	Goldeneye Dunlin⁹ Mallard⁶ Pochard⁶ Oystercatcher
Decreasing	Stable	Site specific Short	
	Decreasing	AE further consideration	

Species for which the sector is important are shown in bold.
Species on alert are shown in red.

⁸ BTO alerts report 2006 – taking into account winters up to 2004/05

⁹ BTO alerts update 2007 – taking into account winters up to 2005/06

The table above shows that the proposal would have no adverse effect on all species except for lapwing and golden plover. The WeBS analysis has shown that this is not an important sector for these species – golden plover mean peak over last five winters of 151 birds and lapwing mean peak over last five winters of 379 birds. In addition, the habitat type (2 fishing pits) is not suitable for these species and therefore they are not likely to have been recorded on the applicants land. Although several species have been identified by the BTO as being on alert on the estuary as a whole, they are all increasing within this sector with the current level of wildfowling.

In combination assessment

There are currently no plans or projects taking place within or adjacent to this WeBS sector, however there are a number of other ongoing activities, both within the relevant WeBS sector, and elsewhere on the estuary which have the potential to cause both direct and indirect disturbance effects, and thus to act 'in combination' with this wildfowling proposal.

- Recreational activities – a number of activities such as walking (people and dogs), birdwatching and fishing are popular in this area, and have the potential to cause disturbance.
- There have been no reported incidents of disturbance, such as illegal wildfowling or off-road vehicles in this section of the estuary.
- Also, inappropriate flood and coastal defences and coastal squeeze is affecting the area – the presence of inappropriate flood defences is resulting in the process of coastal squeeze, particularly in the middle estuary area. The resulting loss of upper shore and saltmarsh areas reduces the area of suitable habitat available for roosting birds at high tide, potentially making them more vulnerable to disturbance effects. This will be compensated through the Environment Agency's Flood Risk Management.

As the trends inferred from the WeBS data are the results of all factors (both on and off the site) impacting on the SPA species utilising a particular sector, the WeBS analysis constitutes an in-combination assessment of the 'health' of the sector and the species it supports. Consequently the in-combination effects of these activities have already been taken into account in the assessment, and are translated into the table above.

The notice is a renewal of that consented in 2005 (6 visits per month) and so there will be no change in the level of wildfowling in the sector. The analysis recommends a short term consent for gadwall as the sector is important for this species (supporting over 20% of the estuary's population) and the sector population is not increasing in line with the estuary population – indicating that there may be a problem in the sector. Therefore, the consent will be time-limited for 5 years. This enables us to conclude that the proposals as detailed in the notice will have no adverse effect alone or in combination on the designated sites. The situation will be reviewed in 5 years time if the applicant re-applies for consent.

The conditions applied to the consent are:

- 1) This consent expires on 31 January 2013.
- 2) Bag returns will be sent to Natural England at the end of each season.

Further information on these conditions is provided in the Statement of Reasons accompanying the consent.

Example two

Table of possible scenarios to inform conclusions of adverse effect (AE) and timescales for issuing consent (short and long) Taken from “*Natural England’s approach to assessing and responding to wildfowling notices on SSSIs and European sites*”

Estuary/site population trend	Sector population trend	Wildfowling Levels	Species
		New area	
	Increasing	Site specific Short	
Increasing	Stable	Site specific Short	Wigeon Mallard
	Decreasing	AE further consideration	
	Increasing	Site specific Short	
Stable	Stable	Site specific Short	
	Decreasing	AE further consideration	Scaup Goldeneye
	Increasing	AE further consideration	Oystercatcher Knot Dunlin
Decreasing	Stable	AE further consideration	
	Decreasing	AE further consideration	

Species for which the sector is important are shown in bold.
Species on alert are shown in red.

The table above shows that the proposal would have an adverse effect on scaup, goldeneye, oystercatcher, knot and dunlin, and site specific information should be considered to assess the impact on wigeon and mallard.

In combination assessment

There are currently no plans or projects taking place within or adjacent to this WeBS sector, however, there are a number of other ongoing activities, both within the relevant WeBS sector, and elsewhere on the estuary which have the potential to cause both direct and indirect disturbance effects, and thus to act 'in-combination' with this wildfowling proposal.

- Recreational activities – a number of activities such as walking (people and dogs), birdwatching, bait digging, kite flying and cycling are popular in this area, and have the potential to cause disturbance.
- There have been no reported incidents of disturbance, such as illegal wildfowling or offroad vehicles in this section of the estuary.
- Also, inappropriate flood and coastal defences and coastal squeeze – the presence of inappropriate flood defences is resulting in the process of coastal squeeze, particularly in the middle estuary area. The resulting loss of upper shore and saltmarsh areas reduces the area of suitable habitat available for roosting birds at high tide, potentially making them more vulnerable to disturbance effects. This will be compensated through the Environment Agency's Flood Risk Management Strategy.

As the trends inferred from the WeBS data are the results of all factors (both on and off the site) impacting on the SPA species utilising a particular sector, the WeBS analysis constitutes an in-combination assessment of the 'health' of the sector and the species it supports. Consequently the in-combination effects of these activities have already been taken into account in the assessment, and are translated into the table above.

Work undertaken by the local university identifies a key high tide roost in this section of the estuary. It is recorded as supporting flocks of up to several thousand knot and dunlin and up to 100 oystercatcher, in addition to a number of other species. Natural England believes that impacts on these species can be avoided through the imposition of a condition relating to a temporal high tide refuge in this location. The high tide roost is utilised by SPA birds until the tidal height reaches 7.6m (Port of Waterside), therefore the condition will state that "no shooting is allowed during the period of 2 hours either side of tides up to and including 7.6m (Port of Waterside)".

Scaup and goldeneye are diving ducks, generally found in deeper water. Shooting in this area takes place at dawn and dusk with the wildfowling awaiting the incoming tide. This pushes feeding birds off the intertidal and onto inland areas for feeding and roosting. Natural England therefore believes that these diving ducks are unlikely to be significantly impacted by the proposed shooting because they will remain out on the water. However, a time limit will be applied to the consent and a maximum number of visits; this will also avoid any adverse effect on wigeon and mallard. This

is not an important sector for these species and they are not on alert, however the proposal should be carefully considered as this area has not been subject to shooting previously. These conditions enable Natural England to conclude that the proposals as detailed in the notice will have no adverse effect alone or in combination on the designated sites. The situation will be reviewed in 5 years time if the applicant re-applies for consent.

The conditions applied to this consent are:

- 1) No shooting is permitted during the period of two hours either side of tides up to and including 7.6m (Port of Waterside) at Island Farm refuge, see map.
- 2) Shooting is permitted for five years, until 20 February 2014.
- 3) A maximum of 30 visits is permitted per wildfowling season (Sept to Feb.)

Further information on these conditions is provided in the Statement of Reasons accompanying the consent.

Appendix 3. Standard notice and returns form

NOTICE OF PROPOSAL TO CARRY OUT WILDFOWLING DURING THE
WILDFOWLING SEASON – SEPTEMBER 1st to FEBRUARY 20th

(SECTION 28(E) OF THE WILDLIFE AND COUNTRYSIDE ACT 1981)

.....**SITE OF SPECIAL SCIENTIFIC INTEREST**

**1. (a) Name of owner/
occupier (please
delete as applicable)**

**(b) Address of owner/
occupier (please
delete as applicable)**

I give notice under Section 28(E) of the Wildlife and Countryside Act 1981 of my proposal to carry out cause or permit to be carried out the operation as described below:-

2. Operation Details

**(a) Area covered (as
indicated on enclosed map)**

**(b) Timing (i.e. number of
years of consent is sought
for)**

**(c) Max number of visits
per season (one visit is one
person with one gun)**

**(d) Gun type (shoulder or
punt) where area has not
previously been shot**

**(e) Indication of bag
returns (based on previous
years' data)**

**(g) Any other information
(ie regulated through
issuing of permits,
presence of wardens,
refuge areas etc)**

The number of visits and bag returns will be submitted to Natural England at the end of each season. This information will be essential to inform consideration of future notices. Where wildfowling covers a wide area, the information (i.e. bag returns) will be broken down into 'zones' as shown on the attached map.

Signed for owner or occupier:

Date

Example of good practice bag return

Date	Time on site	Wildfowler	No of shots fired	Species shot	Numbers shot	Comments
4/9/08	04:00-08:00	Steve	7	Mallard Teal	2 1	4x4 on the marsh
4/9/08	04:00-06:00	Simon	4	Teal	2	2 poachers ejected

Appendix 4. Example of WeBS analysis available from the BTO

Overview of population trends of each species by sector assessed over three timescales short- (5-year), medium- (10-year) and long-term (15-year). For complete details refer to Appendix D, Table D.i. For each sector, declines are given precedence over increases as the former are of primary concern. Cells are coloured to indicate trend status as follows: Red - a maximum decline in numbers of at least 50% over at least one timescale; Orange - a maximum decline in numbers of at least 25% but less than 50% over at least one timescale; Light green – a maximum increased of at least 33% but less than 100% over at least one timescale; Dark green - a maximum increase of at least 100% on at least one timescale; White - a maximum decline less than 25% and a maximum increase less than 33% on all three timescales. Grey - insufficient data for or too few individuals (arbitrarily taken as an average of ten or less) of, a given species to allow meaningful smoothed trends to be generated. S/s (short), M/m (medium) and L/l (long) are used to indicate the timeframe associated with any declines: upper case for high declines, lower case for medium declines

		GEESE	
Sector	Location	Pink-footed Goose	Dark-bellied Brent Goose
38907	River Humber - Howdensyde to Whitgift		
38430	Blacktoft Sands		
38432	Faxfleet to Brough Haven	SML	
38433	Brough Haven to North Ferryby		
38434	North Ferryby to Hessle Haven		
38436	Hessle to Hull		
38440	Hull to Paull		
38441	Paull to Stone Creek (Cherry Cobb Sands)		
38442	Stone Creek to Patrington		
38443	Patrington to Easington		
38444	Spurn Head		
38931	Humber Estuary (North)		
38423	Alkborough Flats		
38424	Humber Estuary (South Inner) Sector B1		
38419	Humber Estuary (South Inner) Sector B3		
38921	Winteringham Haven	SML	
38418	Read's Island Flats		
38417	South Ferryby		
38409	Barton Cliff		
38415	Barton to Chowder Ness		
38414	Barrow to Barton (including Pits)		
38413	New Holland to Barrow		
38412	Goxhill to New Holland		
38411	Goxhill Marsh		
38407	Halton Marshes		
38406	Killingholme Marshes		
38905	Immingham Docks		
38425	Humber South (Inner)		
38405	Pyewipe		
38403	Cleethorpes North Wall to Grimsby		
38401	Cleethorpes - North Promenade to Anthony's Bank		
35487	Tetney Haven to Humberston Fitties		
35486	Horseshoe Point to Tetney Haven		
35485	Grainthorpe Haven Pye's Hall to Horseshoe Point		
38427	Humber South (Mid)		
35478	Grainthorpe to Somercotes		SML
35484	Somercotes to Donna Nook		
35483	Donna Nook		SML
35481	Salfleet		
35480	Theddlethorpe to Salfleetby		SML
35479	Theddlethorpe to Mablethorpe North End	SML	
38429	Humber South (Outer)		
38901	Humber Estuary (South)		
38930	Humber Estuary (North and South)		
38201	North Killingholme Haven Pits		
Note this site is just inland of Halton Marshes in Humber South (Inner)			
38404	Grimsby Commercial Docks		
Note this site is just inland of Pyewipe in Humber South (Mid)			

[illegible][illegible]

The two sites in italics are separate from the Humber Estuary (North and South) subsite (38930) and therefore not part of the Humber Estuary (South) grouping, but are part of the whole Humber Estuary WeBS Site (38950)

Assessing & responding to wildfowling notices on SSSIs and European sites

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Content owner: Sue Beale

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Changes in the proportion of the total site population of each species supported by each sector, assessed over the most recent 15-year period. Cells are coloured to indicate a sector's proportional contribution to numbers on the estuary as a whole, as follows: Red - a highly significant decline ($P < 0.01$); Orange - a significant decline ($P < 0.05$); Light green – a significant increase ($P < 0.05$); Dark green - a highly significant increase ($P < 0.01$); White – no significant trend over the period. Grey - insufficient data for or too few individuals (arbitrarily taken as an average of ten or less) of, a given species to allow a meaningful Logit model to be fitted.

The two sites in italics are separate from the Humber Estuary (North and South) subsite (38930) and therefore not part of the Humber Estuary (South) grouping, but are part of the whole HUMBER ESTUARY site (38930).

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Peak counts by species and count sector for the estuary shown as the mean of peak counts over the most recent available five winters (first number) and the peak count in the latest winter (second number). Colours show sites that hold a substantial proportion of the site population arbitrarily defined and in order of priority as follows: Dark Green – sectors with a mean of peak counts over the last five winters that is at least 20% of the total mean of peak counts for the estuary over the same period; Dark Blue – Sites with a mean of peak count over the last five winters that is between 10% and 20% of the total mean of peak count for the estuary over the same period; Light Green – Sites with a peak count in the latest year that is at least 20% of the total peak count for the estuary in the latest year; Light Blue – Sites with a peak count in the latest year that is between 10% and 20% of the total peak count for the estuary in the latest year.

		GEESSE	
Sector	Location	Pink-bellied Goose	Pink-bellied Brent Goose

38307	River Humber - Howdensdyke to Whitgift		
38430	Blacktoft Sands	413; 1500	0; 0
38432	Faxfleet to Brough Haven	16; 0	0; 0
38433	Brough Haven to North Ferryby	0; 0	0; 0
38434	North Ferryby to Hessel Haven		
38436	Hessel to Hull		
38440	Hull to Paull		0; 0
38441	Paull to Stone Creek (Cherry Cobb Sands)	8; (14)	5; 1
38442	Stone Creek to Patrington	97; 12	70; 220
38443	Patrington to Easington	145; 0	65; 29
38444	Spurn Head	3; 6	421; 500
38931	Humber Estuary (North)	625; 1518	478; 636

38423	Aikborough Flats	1; 0	0; 0
38424	Humber Estuary (South Inner) Sector B1	0; 0	0; 0
38419	Humber Estuary (South Inner) Sector B3	17; 0	0; 0
38921	Winterringham Haven	1; 0	0; 0
38418	Read's Island Flats	4594; 0	
38417	South Ferryby		0;
38409	Barton Cliff	0; 0	
38415	Barton to Chowder Ness	96; 0	
38414	Barrow to Barton (including Pits)	0; 0	0; 0
38413	New Holland to Barrow	0; 0	
38412	Goxhill to New Holland	1; 0	0; 0
38411	Goxhill Marsh	1; 0	3; 0
38407	Halton Marshes		
38406	Killingholme Marshes		
38905	Immingham Docks		
38425	Humber South (Inner)	3683; 0	3; 0

38405	Pewpew		0;
38403	Cleethorpes North Wall to Grimsby		
38401	Cleethorpes - North Promenade to Anthony's Bank		144;
35487	Tetney Haven to Humberston Fitties	0;	800;
35486	Horseshoe Point to Tetney Haven	0; 0	1190; 1130
35485	Grainthorpe Haven Pys's Hall to Horseshoe Point	16; 0	1351; 2660
38427	Humber South (Mid)	16; 0	12660

35478	Grainthorpe to Somercotes	285; 1100	279; 460
35484	Somercotes to Donna Nook	162; 0	736; 750
35483	Donna Nook	21; 0	310; 0
35481	Saltfleet	81; 28	750; 356
35480	Theddlethorpe to Saltfleetby	211; 370	128; 76
35479	Theddlethorpe to Mablethorpe North End	11; 0	0; 2
38429	Humber South (Outer)	627; 1246	1726; 1352

38901	Humber Estuary (South)	4822; (1246)	3025; 3950
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38930	Humber Estuary (North and South)	6562; (1518)	3611; 4586
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38201	North Killingholme Haven Pits	0; 0	0; 0
Note this site is just inland of Halton Marshes in Humber South (Inner)			

38404	Grimsby Commercial Docks		
Note this site is just inland of Pwepew in Humber South (Mid)			

The two sites in italics are separate from the Humber Estuary (North and South) subsite (38930) and therefore not part of the Humber Estuary (South) grouping, but are part of the whole Humber Estuary (38950)

DUCKS									
Shelduck	Wigeon	Scaup	Teal	Mallard	Pintail	Shoveler	Postard	Tufted Duck	Goldeneye

0;	31;	12;	88;						
59; 64	822; 480	24; 26	460; 608	136; 135	1; 0	46; 46	22; 16	1; 0	1; 2
472; 378	2018; 837	12; 46	434; 143	172; 82	1; 0	8; 6	9; 16	8; 4	0; 0
44; (8)	108; (19)	(92)	94; (38)	(143)	2; (0)	(14)	142; (29)	70; (40)	10; (17)
0; 0	0; 0	0; 0	46; 35	0; 0		0; 0	1; 1	0; 0	
2; 0	0; 0		15; 6						
169; 240	0; 0	471; 406	131; 140						
1453; 1276	515; 674	8; 0	653; 621	334; (629)	7; 3	3; 2	0; 0	0; 0	0; 0
672; (1220)	439; (295)	2; 2	61; (108)	333; 524	11; (44)	0; 0	0; 0	0; 0	1; 1
1223; 1750	54; 0	0	15; 34	206; 228	90; 144	0; 0	0; 0	0; 0	0; 0
364; 436	101; 7	2; 0	58; 3	102; 79	2; 0	3; 0	3; 0	1; 0	5; 2
3166; 4238	2689; 1640	106; (135)	1413; 1138	1491; 1043	119; 144	63; 52	(169; 61)	75; (41)	(17; 17)

26; 69	39; 13	1; 7	34; 50	25; 62	0; 0	5; 18	0; 0	0; 0	0; 0
9; 12	183; 296	0; 0	12; 50	0; 0	0; 0	0; 0	0; 0	0; 0	0; 0
34; 0	671; 393		0; 0	6; 2					0; 0
547; 228	28; 0		268; 0	65; 2	2; 0	0; 0			
319; 374	4; 1	1723; 98;		10; 8;	0; 0	0; 0			0;
15;	83;	1;	53;	29;	2;				0;
10; 28	4; 12	8; 16	59; 65	42; 32	0; 0	13; 10	24; 23	35; 40	8; 16
0; 2	2; 4	22; 6	11; 22	83; 56	0; 0	6; 4	48; 73	44; 35	7; 4
9; 7	148; 88	53; 51	29; 22	189; 225	0; 0	26; 20	112; 53	106; 156	29; 43
3; 2	0; 0	2; 1	0; 0	124; 56	0; 0	2; 2	11; 7	16; 14	0; 1
2; 9	61; 14	2; 10	11; 51	166; 71	0; 0	2; 6	633; 110	277; 270	413; 370
22; 38	39; 69	5; 0	188; 60	213; 212	0; 0	4; 1	0; 0	6; 4	17; 0
5; 4	0; 0	1; 0	6; 0	25; 29	0; 0	0; 0	12; 42	5; 2	0; 0
4; 2	1; 0	4; 3	16; 0	19; 7		14; 18	5; 0	4; 7	0; 0
67; 60	0; 0		37; 0	70; 42					0; 0
1190; (278)	1720; (393)	85; 72	1989; (149)	823; (594)	18; (0)	46; (32)	343; 184	328; 394	464; 390

370; 0;		5;	104;		0;	0;	0;	0;	
229; 4;		10;	48;	0;	0;	0;	0;	0;	
56; 80;	0;	9;	60;	1;	0;	0;	0;	1;	
91; 42	1; 0	10; 0	50; 0	2; 3	1; 0	0; 0	0; 0	0; 0	
186; 214	81; 41	0; 0	10; 27	6; 4	2; 3				0; 0
1001; (256)	115; (41)	0; 0	26; (27)	198; (4)	3; (4)	0; 0	0; 0	0; 0	0; 0

138; 203	109; 256		23; 23	5; 1	21; 1	1; 0			
228; 168	88; 80	0; 0	131; 70	118; 160	2; 6	0; 0	4; 2	0; 0	
184; 63	12; 0		43; 57	4; 6	1; 0	0; 0	7; 18	0; 0	
256; 170	25; 2		24; 9	8; 4	2; 4			2; 9	
192; 106	445; 450	0; 0	416; 280	30; 41	1; 0	7; 17	0; 0	6; 22	1; 1
4; 0	0; 0		0; 0	0; 0				0; 0	
752; 576	549; 656	0; 0	477; 298	140; 188	23; 6	7; 17	0; 0	17; 42	3; 9

(848)	1817; (892)	85; 72	2313; (372)	946; (723)	34; 9	49; (40)	343; 184	330; 403	464; 390
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4522; (4569)	4596; (2532)	178; (179)	3444; (1510)	2320; 1742	140; 147	104; 82	433; 210	377; 444	472; 401
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8; 7	0; 0	1; 0	53; 26	43; 84	0; 0	84; 34	0; 0	1; 0	0; 0
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WADERS									
Dystercatcher	Ringed Plover	Sooty Plover	Grey Plover	Lapwing	Knot	Dunlin	Black-tailed Godwit	Bar-tailed Godwit	Curlew

0;	367;	5;	188;						35;
1; 0	0; 0	5208; 18000	0; 0	2543; 7500	0; 0	53; 20	10; 7	0; 0	24; 41
1; 0	7; 5	5564; 4431	0; 0	5111; 4132	0; 0	515; 483	3; 2	21; 70	194; 213
(3)	(13; (15)	749; (0)	0; 0	882; (131)	0; 0	159; (19)	5; (10)	2; (0)	86; (98)
0; 1	4; 15	0; 0	0; 0	11; 1		30; 1		0; 0	0; 1
0; 0	14; 0	0; 0	0; 0	155; 196	0; 0	607; 382		0; 0	2; 2
2; 4	1475; 119	3553; 22559	0; 0	2869; 4120	2; 12	2151; 2213	68; 235	294; 468	337; 345
42; (27)	6; 0	21741; 14532	821; (1199)	6852; 2110	722; 704	4079; 2328	187; 54	646; (225)	879; 1310
117; (109)	1; (1)	3552; 400	414; 1200	2176; (350)	1778; (1226)	1614; (2590)	97; 0	206; (34)	471; 247
417; 773	4; 2	3247; 2545	301; 114	558; 340	8560; 14000	6800; 10000	25; 1	1248; 247	1291; 1000
1158; 594	26; 39	1829; 950	297; 217	600; 377	15250; 25301	2014; 941	40; 6	274; 51	322; 328
1558; 1161	176; 148	37114; 39878	1323; 1787	16747; 11224	20005; 31252	13519; (13790)	428; 161	1925; 581	3004; 3175

0; 0	0; 1	195; 860	0; 0	152; 589		37; 185	0; 0	0; 0	71; 70
0; 0	0	439; 1500	0; 0	176; 668	0; 0	0; 0			54; 70
0; 0	0	51; 0	0; 0	66; 0		3; 0			33; 0
0; 0	0	539;	0;	445;	1;	212;	0;	0;	115;
19;	41;	3250;	3;	1538;	2;	2032;	6;	33;	287;
4;	0;	0;	0;	23;	0;	10;	0;	24;	0;
1; 0	0; 0	0; 0	0; 0	50; 53	0; 0	16; 37	0; 0	0; 0	25; 1
1; 0	0; 0	45; 0	0; 0	96; 5	0; 0	67; 0	0; 0	0; 0	20; 38
2; 2	5; 0	1; 0	0; 0	379; 450	0; 0	152; 28	0; 0	0; 0	30; 39
1; 1	0; 0	0; 0	0; 0	64; 0	0; 0	136; 65	0; 0	0; 0	16; 0
0; 1	1; 1	1184; 200	0; 0	1048; 200	0; 1	505; 640	5; 9	0; 0	31; 5
1; 2	4; 0	4350; 0	0; 0	3156; 1108	2; 0	320; 400	16; 44	7; 30	346; 500
1; 0	0; 0	405; 0	0; 0	1356; 1635		110; 114	1; 0	0; 0	45; 1
0; 0	0; 0	0; 0	0; 0	11; 0	0; 0	23; 15	2; 2	0; 0	31; 58
1; 0	3; 2		0; 0	78; 0	1; 0	189; 94	81; 145	0; 0	32; 18
31; (4)	50; (2)	11470; (1500)	4; (0)	8903; (2981)	5; (1)	2877; (733)	93; 145	33; (30)	815; (562)

24;	3;	670;	19;	720;	6;	360;	1300;	3;	228;
2;	0;					0;			345;
730;	112;	2310;	197;	360;	9100;	3379;	3;	590;	94;
137;	29;	3220;	27;	144;	1160;	700;	0;	45;	40;
195; 240	45; 0	0	86; 122	750; 0	1950; 3100	238; 116	0; 0	135; 270	58; 96
1742; 355	7; 22	1565; 2730	114; 118	1047; 990	1700; 4500	697; 578	0; 1	36; 104	138; 243
(855)	70; (22)	1; (2730)	1; (240)	1; (990)	1; (7600)	3950; (694)	433; (1)	646; (279)	398; (243)

488; 319	2; 0	514; 192	103; 47	1820; 332	1404; 470	330; 250	1; 0	30; 68	78; 102
142; 110	1; 0	1270; 1680	122; 109	777; 1100	3950; 790	804; 140	0; 0	71; 25	42; 39
3; 0	1; 0	160; 0	18; 0	244; 65	683; 0	83; 0	1; 0	10; 0	80; 86
39; 17	18; 6	1420; 1300	78; 85	1130; 2000	1861; 124	1074; 850	0; 0	142; 188	162; 97
51; 43	22; 8	442; 0	48; 27	783; 700	187; 94	329; 66	1; 0	33; 24	183; 241
20; 31	7; 0	16; 0	22; 3	86; 27	101; 0	125; 0	0; 0	11; 7	148; 227
631; 432	39; 14	2870; 2980	250; 221	3940; 3307	5808; 994	2080; 940	1; 0	209; 237	586; 717

Appendix 5. Refuges

Definition of Refuges

AEWA guidance

African Eurasian Waterbird Agreement (AEWA)¹ Technical Series No.19, Conservation Guidelines No. 5 (version 19 April, 2005) *Guidelines on Sustainable Harvest of Migratory Waterbirds*. Prepared by Wetlands International and adopted September 2002. Accessed from http://www.unep-aewa.org/publications/conservation_guidelines.htm on 15 October 2012.

Refuges, where appropriate, should be:

- *free from all activities that cause disturbance, not just those related to hunting;*
- *of sufficient size to be effective, usually calculated according to the sensitivity of the most vulnerable species;*
- *sufficiently diverse to include all habitat components required by the full range of waterbirds present;*
- *protected by buffer zones where hunting activity is managed, to increase the effectiveness of the refuge area;*
- *created where endangered species are difficult to distinguish from quarry species, and may therefore be at risk from accidental hunting mortality.*

Local wildfowling clubs and individuals should be encouraged to play an active role in the implementation of a network of refuges.

¹ The Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) entered into force on 1 November 1999. The AEWA covers 255 species of birds ecologically dependent on wetlands for at least part of their annual cycle, including many species of ducks, swans, geese, waders, gulls, terns, auks and other groups.

The UK is a contracting party and signatory to this agreement, along with 67 other countries and the Agreement provides for co-ordinated action to be taken throughout the migratory systems of the waterbirds to which it applies.

Parties to the Agreement are called upon to engage in a wide range of conservation actions, addressing key issues such as: species and habitat conservation, management of human activities, research and monitoring, education and information, and implementation.

EC guidance

European Commission (December 2008) *Guidance document on hunting under Council Directive 79/409/EEC on the conservation of wild birds 'The Birds Directive'*. Brussels.

Accessed from http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/hunting_guide_en.pdf

On 15 October 2012

The Birds Directive fully recognises the legitimacy of hunting of wild birds as a form of sustainable use. Hunting is an activity that provides significant social, cultural, economic and environmental benefits in different regions of the European Union. The Commission does not consider that socio-economic activities – of which hunting is an example - necessarily contravene the provisions of the Directive. However, it is necessary that such activities within SPAs to be properly managed and monitored to avoid such significant disturbance.

There is no general presumption against hunting in Natura 2000 areas under the Directives. However, it is clear that hunting and other human activities have potential to lead to a temporary reduction in use of habitats within a site. Such activities would be significant if they would lead to a pronounced reduction in the capacity of the site to support the species for which it was designated and would also result in reduced hunting potential.

Depending on the nature of the Natura 2000 sites and hunting practices, management plans should give consideration to the provision of adequate no hunting refuge zones. A comprehensive research programme in Denmark has shown that the careful establishment of hunting free zones can increase at the same time site use by waterfowl and hunting opportunities in the vicinity of such areas.

When information on refuges is essential

Assessing & responding to wildfowl notices on SSSIs and European sites

Authors: Emma Hawthorn, Kate Jennings, and Tim Frayling

Content owner: Sue Beale

Mandatory Guidance Version 1.0 Date of issue: 18.09.2014

Information on refuges would be considered essential when bird species trends are declining OR a new area is proposed for wildfowling OR wildfowling activity is proposed to be increased:

- Information regarding the provision of refuges in the area under consideration would be useful information to inform the assessment process. If this information is not provided in the Notice or on the map provided; it can be requested.
- Where this information is requested and voluntarily provided by the club or individual; clarification should also be sought from the club or individual as to the nature of the 'refuge' i.e. habitats present, size, shape, other types of disturbance that might be present and whether it is a permanent or temporal refuge.
- If it is considered that the provision of the refuge as described is required as mitigation to allow a conclusion of either 'no Likely Significant Effect' or 'no Adverse Effect on Site Integrity', this should be included in the signed Notice or assured by the use of a Condition on any Consent (written in the signed Notice would be the preferred approach).
- In the event that information regarding refuges is not provided by the club or individual and is not voluntarily provided, upon request, it should be assumed that no refuge exists in the area under consideration for the purposes of undertaking the assessment process.
- Information about refuge areas in the wider SPA (or possibly other SPAs if appropriate) can be gathered from external sources, including local and Advisor knowledge, and included in the assessment.

If refuges are considered essential the following guidelines can be used to inform what information should be sought.

1. Identify the relevant landowners, occupiers, customers and other external partners with a view to including them in the discussion and negotiation process, for where the status of refuges needs to be clarified or new areas need to be considered.

2. Set an appropriate scale

- This may be at SPA level, more than one SPA level, sector level or more than one sector level. It may be that not all sectors need a refuge; if adequately provided in other areas of the SPA, assuming the proposed activity does not affect any wider SPA refuges.

3. Identify, describe and map existing refuges (i.e. baseline conditions)

- Area and location
- Habitats
- Other activities that might cause disturbance
- Whether it operates as a permanent no shooting area or there are temporal restrictions only
- Indication of future use of the refuges, if known, e.g. potential for land sale to different owner or climate change impacts
- Consider whether the nature of the site in terms of accessibility, topography or morphology (of, for example, an estuary) might provide refuges for birds without them being described as such.

4. Identify presence of more sensitive areas and events

- Where there is regular use by moderate to large numbers of birds for roosting, feeding and/or moulting and whether diurnal, nocturnal or tide-related
- Regular flight lines to and from roosts and the times these occur.

5. Identify which habitats/areas are required to cover the ecological requirements of the species

- With the aim of providing the full range required by key species (SPA qualifying species and SSSI notified features) at an appropriate size/shape and across an appropriate spatial scale.

6. Consider that there may be other forms of mitigation that might be appropriate, for example (list is not exhaustive):

- temporal shooting restrictions at sensitive times
- buffer zones (smaller areas than refuges) around sensitive areas
- specified zones in non-refuge areas where shooting is permitted from.

Appendix 6. Wildfowling Literature

There is a large amount of literature available on the subject of wildfowling and birds. A list has been prepared and is kept on the wildfowling intranet pages at <http://neintranettechnical/content/technical/topics/wiki.asp?ID=3&PG=3256&AT=5>

The list is not exhaustive and other literature sources will be added as they become available, including local reports and studies. The aim is, for each listing, to provide a short summary including the main findings, with caveats and limitations as a guide to how the evidence can be applied (or not) for different situations. These lists do not represent a full literature review and is not an evidence review.

It is not envisaged or expected that advisers will have to read through vast numbers of papers. However, for those involved in wildfowling consultations, it is worth considering using some 'training and development' time to further knowledge. The wildfowling national network, along with any additional training, can also be used to share knowledge.

The co-ordinator of the literature list is Stella Baylis, Environmental Specialist (Birds), Landscape & Biodiversity. For any additions to the list, please contact Stella on 0300 060 0453 or stella.baylis@naturalengland.org.uk.

Version control and updating information

Document Amendment Record Amendment Detail	Author/s	Date
Guidance Produced	Emma Hawthorn/Kate Jennings/Tim Frayling	March 2001
Minor Update in line with 2010 Habitat Regulations	Tim Frayling	July 2011
Inserted additional paragraphs to address essential information for SSSI and N2K notices, scope of an appropriate assessment and deciding which of the qualifying species on the SPA might be affected by wider, climate-change factors and the definition and application of refuges within the consenting process.	Sue Beale & Stella Baylis	May 2013
Minor Update in line with 2012 amendment to the Habitat Regulations.	Steve Clifton	July 2013