European Site Conservation Objectives: Supplementary Advice on Conserving and Restoring Site Features

Walmore Common Special Protection Area (SPA)
Site code: UK9007051

Winter flooding of Walmore Common, December 2006

Date of Publication: 1 October 2018

About this document

This document provides Natural England's supplementary advice for the European Site Conservation Objectives relating to Walmore Common SPA. This advice should therefore be read together with the SPA Conservation Objectives available here.

You should use the Conservation Objectives, this Supplementary Advice and any case-specific advice given by Natural England, when developing, proposing or assessing an activity, plan or project that may affect this site. Any proposals or operations which may affect the site or its qualifying features should be designed so they do not adversely affect any of the attributes listed in the objectives and supplementary advice.

This supplementary advice to the Conservation Objectives describes in more detail the range of ecological attributes on which the qualifying features will depend and which are most likely to contribute to a site's overall integrity. It sets out minimum targets for each qualifying feature to achieve in order to meet the site's objectives.

The tables provided below bring together the findings of the best available scientific evidence relating to the site's qualifying features, which may be updated or supplemented in further publications from Natural England and other sources. The local evidence used in preparing this supplementary advice has been cited. The references to the national evidence used are available on request. Where evidence and references have not been indicated, Natural England has applied ecological knowledge and expert judgement. You may decide to use other additional sources of information.

In many cases, the attribute targets shown in the tables indicate whether the current objective is to 'maintain' or 'restore' the attribute. This is based on the best available information, including that gathered during monitoring of the feature's current condition. As new information on feature condition becomes available, this will be added so that the advice remains up to date.

The targets given for each attribute do not represent thresholds to assess the significance of any given impact in Habitats Regulations Assessments. You will need to assess this on a case-by-case basis using the most current information available.

Some, but not all, of these attributes can also be used for regular monitoring of the actual condition of the designated features. The attributes selected for monitoring the features, and the standards used to assess their condition, are listed in separate monitoring documents, which will be available from Natural England.

These tables do not give advice about SSSI features or other legally protected species which may also be present within the European Site.

If you have any comments or queries about this Supplementary Advice document please contact your local Natural England adviser or email
HDIRConservationObjectivesNE@naturalengland.org.uk

About this site

European Site information

Name of European Site	Walmore Common Special Protection Area (SPA)
Location	Gloucestershire
Site maps	The designated boundary of this site can be viewed here on the MAGIC website
Designation Date	5 December 1991
Qualifying Features	*Cygnus columbianus bewickii*; Bewick's swan (Non-breeding)
Designation Area	52.85ha
Designation Changes	none
Feature Condition Status	Details of the feature condition assessments made at this site can be found using Natural England's Designated Sites System
Names of component Sites of Special Scientific Interest (SSSIs)	Walmore Common SSSI
Relationship with other European or International Site designations	The boundary of this SPA coincides with Walmore Common Ramsar site.

Site background and geography

Walmore Common SPA falls within of the Severn and Avon Vale National Character Area (NCA), situated in the centre of a low-lying basin/catchment adjacent to the River Severn. The catchment overlies peat and is the only known peat site in Gloucestershire.

The SPA comprises an open area of both unimproved and improved neutral grassland, marshy grassland and a network of open water ditches. The unimproved tussocky grassland occurs in the eastern part of the site and is dominated by wavy hair grass *Deschampsia caespitosa*, marsh foxtail *Alopecurus geniculatus* and creeping bent *Agrostis stolonifera*. The improved grassland is less rich in plant species, consisting largely of perennial rye grass *Lolium perenne*, creeping bent and timothy *Phleum pratense*. The marshy grassland occurs in the separate northern section of the site and supports a good range of rush and sedge species. The land is subject to extensive winter flooding each year and artificially high summer water levels maintained by a tilting weir.

The low-lying grassland landscape and winter flooding regularly attracts large flocks of wildfowl, particularly Bewick's Swans, which are drawn to the area due to its proximity to the Severn Estuary. There are significant movements of wildfowl in the winter months between the Severn Estuary (Slimbridge reserve) and the wider Severn Vale, with Walmore Common SPA used as an overnight and feeding roost.

At least half of the SPA is managed by Trustees as a free common for right-holders exercising their rights to graze livestock in the summer months. The remaining half of the SPA is privately owned and managed for the production of beef. The free common has open access.

About the qualifying features of the SPA

The following section gives you additional, site-specific information about this SPA's qualifying features.

These are the individual species of wild birds and/or the individual regularly-occurring migratory species, and/or the assemblages (groups of different species occurring together) of wild birds for which the SPA was classified for.

Qualifying individual species listed in Annex I of the Wild Birds Directive

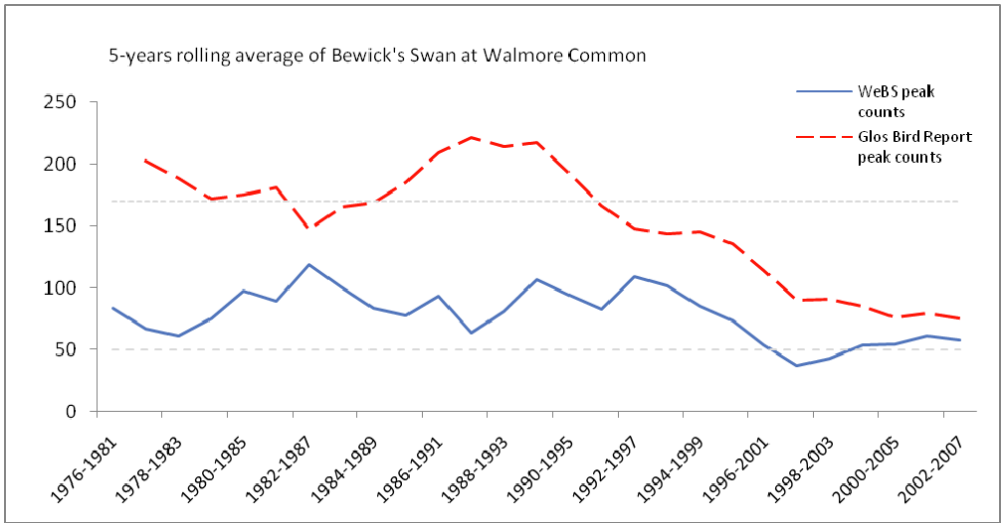
During the non-breeding season the SPA regularly supports:

- ***Cygnus columbianus bewickii*; Bewick's swan**

Bewick's swan are the smallest swan species to visit the UK. Adults are white all over and young birds greyish with a pinkish bill. Compared to the similar whooper swan, these swans have proportionally more black and less yellow on their bill. They are also smaller than both mute and whooper swans and have faster wingbeats. Each winter Bewick's swans migrate to the UK from Siberia.

Walmore Common historically supported internationally important numbers of Bewick's swans during the winter months, and when the SPA was classified in 1991 it represented 3% of the total British wintering population and 1.5% of the European's population (104 birds). The population has since declined significantly from a five year peak mean of 55 individuals in 2000/1-2004/05 (WeBS data from the BTO).

Table 1: Population trend of overwintering Bewick's swan at Walmore Common between 1976 and 2007



(upper grey line – SPA threshold 170, lower grey line – SSSI threshold 150)

The swans mainly congregate at Slimbridge (Severn Estuary SPA) during the winter months but key family groups will regularly make feeding excursions to wetlands across the Severn Vale including Walmore Common SPA, Ashleworth Ham SSSI, Coombe Hill Canal SSSI and Longdon Marsh in Worcestershire.

The swans are attracted to the SPA during winter flooding to feed on the young grass shoots in the waterlogged fields/grassland (both on and off SPA) surrounding the floodwater. At night the Bewick's swans that have opted not to return to Slimbridge will generally roost at the centre of the floodwater.

Site specific seasonality of SPA features

The table below highlights in grey those months in which significant numbers of each mobile qualifying feature are most likely to be present at the SPA during a typical calendar year. This table is provided as a general guide only.

Unless otherwise indicated, the months shown below are primarily based on information relating to the general months of occurrence of the feature in the UK. Where site-based evidence is available and has been used to indicate below that significant numbers of the feature are typically present at this SPA outside of the general period, the site-specific references have been added to indicate this.

Applicants considering projects and plans scheduled in the periods highlighted in grey would benefit from early consultation with Natural England given the greater scope for there to be likely significant effects that require consideration of mitigation to minimise impacts to qualifying bird features during the principal periods of site usage by those features. The months which are *not* highlighted in grey are not ones in which the features are necessarily absent, rather that features may be present in less significant numbers in typical years. Furthermore, in any given year, features may occur in significant numbers in months in which typically they do not. Thus, applicants should not conclude that projects or plans scheduled in months not highlighted in grey cannot have a significant effect on the features. There may be a lower likelihood of significant effects in those months which nonetheless will also require prior consideration.

Any assessment of potential impacts on the features must be based on up-to-date count data and take account of population trends evident from these data and any other available information. Additional site-based surveys may be required. Non-breeding water bird monthly maxima data gathered for this site through the Wetland Bird Survey ('WeBS') may be available upon request from the British Trust for Ornithology.

Feature	Season	Period	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Site-specific references where available
Bewick's swan	Non-breeding	Winter													

Guide to terms:
Breeding – present on a site during the normal breeding period for that species
Non-breeding - present on a site outside of the normal breeding period for that species (includes passage and winter periods).
Summer – the period generally from April to July inclusive
Passage - the periods during the autumn and spring when migratory birds are moving between breeding areas and wintering areas. These periods are not strictly defined but generally include the months of July – October inclusive (autumn passage) and March – April inclusive (spring passage).
Winter - the period generally from November to February inclusive.

Table 1: Supplementary Advice for Qualifying Features: A037 *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (both within and outside the SPA): **extent and distribution**	Extent and distribution of supporting non-breeding habitat	Restore the extent and distribution of grassland habitat which supports Bewick's Swan for all necessary stages of the non-breeding/wintering period (moulting, roosting, loafing, feeding)	Conserving or restoring the extent of supporting habitats and their range (>100ha of floodplain grassland) will be key to maintaining the site's ability and capacity to support the SPA population. The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection. This target may apply to supporting habitat which also lies outside the site boundary. The principal habitat used by Bewick's Swans at this SPA are improved and semi-improved grassland, unimproved wet grassland and rush-pasture. **Severn & Avon Vale:** Walmore Common SPA lies with the Severn Vale / Severn Estuary. Supporting habitat outside of the SPA boundary (or 'Functionally linked land (FLL)) is considered to be critical to maintaining the presence of the swans at Walmore. The Bewick's swans congregate at Slimbridge, part of the Severn Estuary SPA. The swans have been recorded (Rees 1990) to use 10 key sites across Gloucestershire all situated within 3km from either the Severn or Avon rivers. These sites include Walmore Common SPA as well as Ashleworth Ham SSSI, Coombe Hill Canal SSSI. Other sites visited are non SSSIs as far north as Longdon Marsh in Worcestershire. **Walmore Common:** Flight paths of the swans mainly follow the River Severn to access the wider Severn Vale. At Walmore Common, the swans from Slimbridge tend to fly on and off Walmore over Walmore Hill from the River Severn (ADAS 2008). The Bewick's swans at Walmore Common use the fields surrounding the floodwater. For smaller floods the swans will largely be on the SPA fields but for bigger flood events they are mainly found off the SPA fields.	NATURAL ENGLAND. Maps of distribution of feeding swans in the 1990s. Available from Natural England on request ADAS, 2008. Ecological Assessment to support a wind turbine proposal at Severn Smokery GLOUCESTERSHIRE NATURALIST SOCIETY Gloucestershire Bird Reports BTO WeBS count (also included in Glos Birds Report) REES, E (1990). Bewick's Swans: Their Feeding Ecology and Coexistence with Other Grazing Anatidae *Journal of Applied Ecology*, 27 939-951

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (both within and outside the SPA): **function/ supporting process**	Hydrology, water quality/quantity	Restore water quality and quantity to a standard which provides the necessary conditions to support the Bewick Swan feature; Typical flood regime at Walmore should be at least one annual flood event lasting 10 days between Oct -March period covering 30-90% of the site Standing water should be shallow and <1 metre deep across majority of the flooded grassland. Maintain water quality targets: under 0.1mg/l total phosphorus and 2mg/l of total nitrogen.	For many SPA features which are dependent on wetland habitats supported by surface water, maintaining the quality and quantity of water supply will be critical, especially at certain times of year during key stages of their life cycle. Poor water quality and inadequate quantities of water can adversely affect the availability and suitability of breeding, rearing, feeding and roosting habitats e.g. Deeper water does not serve any benefit to the swans and will only damage the grassland sward. Typically, meeting the surface water and groundwater environmental standards set out by the Water Framework Directive (WFD 2000/60/EC) will also be sufficient to support the SPA Conservation Objectives but in some cases more stringent standards may be needed to support the SPA feature. Further site-specific investigations have been undertaken to establish appropriate standards for the SPA. This are reflected in the Water Level Management Plan (see Just Ecology, 2007).	JUST ECOLOGY, 2007. Walmore Common Water Level Management Plan. Report to Lower Severn Drainage Board GILMAN K. 2007 Hydrological investigation into the buried peat at Walmore Common – Report to EA/NE/LSDB RSPB dataset (1990's dataset) Trustees' dipwell on Free Common (still operating) EA level gauge in Low Level Carrier (discontinued in 2010) Trustees' level gauge in Low Level Carrier (still operating) Water quality sampling adhoc sampling EA ESNET units sampling 2015/16
Supporting habitat (both within and outside the SPA): function/ supporting	Conservation measures	Restore the management measures (whether within and/or outside the site boundary as appropriate) necessary to maintain the structure, function and/or the supporting processes	Active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target. Further details about the necessary conservation measures for this site will typically be found within, where applicable, supporting documents such as	ENGLISH NATURE, 2005. Views about the management of Walmore Common SSSI. JUST ECOLOGY,

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
process		associated with Bewick's Swan and its supporting habitats.	Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements. Land management measures are currently being delivered through a series of Higher Level Scheme agreements Hydrological management measures are delivered primarily though the current Water Level Management Plan (Lower Severn IDB) and the Diffuse Water Pollution Plan (EA/NE) for the site.	2007. Water Level Management Plan 2007 NATURAL ENGLAND, 2015. Site Improvement Plan for Walmore Common SPA. SIP255. NATURAL ENGLAND/ ENVIRONMENT AGENCY 2014 Diffuse Water Pollution Plan 2014 (available from local NE team).
Supporting habitat (both within and outside the SPA): function/ supporting process	Connectivity with supporting habitats	Maintain the safe passage of Bewick's swans moving between roosting and feeding areas during their non-breeding period	The ability of the feature to safely and successfully move to and from feeding and roosting areas is critical to their fitness and survival when they reside at the SPA during the winter months. This target will apply within the site boundary and where birds regularly move to and from off-site supporting habitat. This is relevant to this SPA where swans are known to use areas outside of the SPA boundary. Avoid significant constructions of structures, barriers and obstacles posing collision risks at key sites and across flight-lines between the SPA and other functionally-linked land.	
Supporting habitat (both within and outside the SPA): minimising disturbance	Minimising disturbance caused by human activity	Restrict and reduce the frequency, duration and/or intensity of disturbance within close proximity of roosting, foraging, feeding, moulting and/or loafing Bewick's swans so that the feature is not significantly disturbed	The nature, scale, timing and duration of some human activities can result in the disturbance of birds at a level that may substantially affect their behaviour, and consequently affect the long-term viability of the population. Such disturbing effects can for example result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, and desertion of supporting habitat (both within or outside the designated site boundary where appropriate). This may undermine successful feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts. Disturbance associated with human activity may take a variety of forms including noise,	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			light, sound, vibration, trampling, presence of people, animals and structures. Incidental disturbance to swans should be minimised across and around this SPA.	
Supporting habitat (both within and outside the SPA): structure	Food availability; Vegetation characteristics	Maintain predominantly short (<10 cm) grassland swards within the SPA, composed of soft-leaved grasses, in areas used for feeding Maintain the availability of cereal grains, rape, potatoes and sugar beet crops in close proximity to the SPA, where these sources are locally important to feeding swans	The height, cover, variation and composition of vegetation are often important characteristics of habitats supporting this feature which enable successful foraging. Many bird species will have specific requirements that conservation measures will aim to maintain, for others such requirements will be less clear. Activities that may directly or indirectly affect the vegetation of supporting habitats and modify these characteristics may adversely affect the feature. Grass biomass on the SPA is regarded to be important in attracting the swans (along with presence of floodwater) to Walmore Common. The biomass/food supply is influenced by the farming practice in the previous year. Prompt removal of livestock (before beginning of Nov) and cutting of hay (in June/July) both help increase biomass of grass. The swans seem to have a preference for Marsh fox tail (*Alopecurus geniculatus*) that is typical of damp depressions. Any prolonged widespread flooding is likely to reduce the availability marsh fox-tail. Other preferred food-plants include *Lolium perenne, Glyceria fluitans, Phleum pratense,* Typical movements of swans in the Severn Vale indicate they may also favour arable/stubble/root crops fields during the early winter months helping the swans to recover lost body mass from the autumn migration. As these arable fields become depleted the swans will then forage on permanent pasture later in the winter to build up the body mass ready for the spring migration.	REES E (1990) Journal of Applied Ecology 27 939-951 ROBINSON, COLHOUN, MCELWAINE, REES (2004). Bewick's Swan (Northwest Europe population) in Britain & Ireland 1960/61 – 1999/2000 *Waterbird Review Series* WWT/JNCC
Supporting habitat (both within and outside the SPA): structure	Landscape	Maintain open and unobstructed terrain within and around roosting and feeding areas, with field sizes >6ha.	This feature is known to favour large areas of open terrain, largely free of obstructions, in and around its roosting and feeding areas. This can ensure that there is an unobstructed line of sight within feeding and roosting habitat enabling swans to detect approaching predators An open landscape may also be required to facilitate successful movement of birds between the SPA and any off-site supporting habitat.	
Non-breeding	Population abundance	Subject to natural change, restore the size of the non-	This will sustain the site's population and contribute to a viable local, national and bio-geographic population.	NAGY S., PETKOV N., REES E.,.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
population		breeding Bewick's swan population to a level which is above a mean of 170 individual birds, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	Due to the mobility of birds and the dynamic nature of population change, the target-value given for the population size of this feature is considered to be the minimum standard for conservation/restoration measures to achieve. This minimum value may be revised where there is evidence to show that a population's size has significantly changed as a result of natural factors or management measures and has been stable at or above a new level over a considerable period. The values given here may also be updated in future to reflect any strategic objectives which may be set at a national level for this feature. Given the likely fluctuations in numbers over time, any impact-assessments should focus on the current size of the site's population, as derived from the latest known or estimated level established using the best available data. This advice accords with the obligation to avoid deterioration of the site or significant disturbance of the species for which the site is classified, and seeks to avoid plans or projects that may affect the site giving rise to the risk of deterioration. Similarly, where there is evidence to show that a feature has historically been more abundant than the stated minimum target and its current level, the ongoing capacity of the site to accommodate the feature at such higher levels in future should also be taken into account. Maintaining or restoring bird abundance depends on the suitability of the site. However, factors affecting suitability can also determine other demographic rates of birds using the site including survival (dependent on factors such as body condition which influences the ability to breed or make foraging and/or migration movements) and breeding productivity. Adverse anthropogenic impacts on either of these rates may precede changes in population abundance (e.g. by changing proportions of birds of different ages) but eventually may negatively affect abundance. These rates can be measured/estimated to inform judgements of likely impacts on abundance targets. Unless otherwise stated, the population size will be that measured using standard methods such as peak mean counts or breeding surveys. This value is also provided recognising there will be inherent variability as a result of natural fluctuations and margins of error during data collection. Whilst we will	SOLOKHA A., HILTON G., BEEKMAN J. AND NOLET B. 2012 International Single Species Action Plan for the conservation of the North West population of the Bewick's Swan. AEWA. Also datasets from Gloucestershire Bird Reports and BTO WeBS counts

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			endeavour to keep these values as up to date as possible, local Natural England staff can advise that the figures stated are the best available.	
Version Control Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: Additional text been added to the attribute for 'Extent & Distribution' to reflect that significant areas outside the SPA are used by the swans both in close-proximity to the SPA, and also within the wider landscape Additional text been added to the attribute for 'water quality/quantity' to set baseline target of typical flood regime at Walmore Common Additional text been added to the attribute for management to list the agreements/plans covering Walmore Common Additional text been added to population abundance to acknowledge significant decline of Bewick's swan population at Walmore Common.				