



European Site Conservation Objectives: Supplementary advice on conserving and restoring site features

**Chew Valley Lake
Special Protection Area (SPA)
Site Code: UK9010041**



(Photo Tom Lane – Natural England)

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About this document

This document provides Natural England's supplementary advice for the European Site Conservation Objectives relating to Chew Valley Lake SPA.

This advice should therefore be read together with the SPA Conservation Objectives available [here](#).

This advice replaces a draft version dated 21 January 2019 following the receipt of comments from the site's stakeholders.

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.

This Supplementary Advice to the Conservation Objectives presents attributes which are ecological characteristics of the designated species and habitats within a site. The listed attributes are considered to be those that best describe the site's ecological integrity and which, if safeguarded, will enable achievement of the Conservation Objectives. Each attribute has a target which is either quantified or qualitative depending on the available evidence. The target identifies as far as possible the desired state to be achieved for the attribute.

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	Chew Valley Lake Special Protection Area (SPA)
Location	Bath & North East Somerset
Site Map	The designated boundary of this site can be viewed here on the MAGIC website
Designation Date	30 January 1996
Qualifying Features	See section below
Designation Area	575.94ha
Designation Changes	n/a
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)	Chew Valley Lake SSSI
Relationship with other European or International Site designations	There is likely to be an undefined functional link between this site and the Somerset Levels & Moors SPA and Severn Estuary (SPA , SAC , Ramsar)

Site background and geography

Chew Valley Lake SPA is located south of Bristol and is the largest artificial freshwater lake in South West England. It is a large, shallow reservoir with peripheral areas of reedbeds, carr woodland and neutral grassland, some of which is species-rich.

The water conditions are eutrophic and open water plant communities are rather sparse. The open water of the reservoir and its margins are of high value for wintering waterbirds, specifically overwintering Northern Shoveler *Anas clypeata*.

The Chew Valley is situated within the Bristol, Avon Valleys and Ridges National Character Area (NCA). The NCA encompasses the City of Bristol with its historic port, and the surrounding area including the Chew and Yeo valleys, Keynsham, Clevedon, Portishead and parts of the Cotswolds and Mendip Hills Areas of Outstanding Natural Beauty (AONB). The area is characterised by alternating ridges and broad valleys, with some steep, wooded slopes and open rolling farmland. More information on the NCA can be found [here](#).

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 listed on Annex I of the European Wild Birds Directive, 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 not listed in Annex I of the Wild Birds Directive (Article 4.2)**

During the non-breeding season the SPA regularly supports:

- **Shoveler *Anas clypeata*,**

503 individuals representing 1.3% of the wintering Northwestern/Central Europe population (5 year peak mean 1991/2 - 1995/6) reliant upon undisturbed open waters with sufficient submerged and emergent vegetation to support prey species found on or just below the surface. Arguably the population at Chew Valley Lake could be viewed in combination with that of nearby Blagdon Lake SSSI as its proximity is nearer at its closest point than Chew Valley Lake is long (at its widest point).

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.

The site-specific seasonality of SPA features table provides a guide to the relative importance of each month, darker indicating more important. Sep-Nov are generally the most important months with Aug/Dec being significant quite frequently. Jan-Mar do not frequently support significant populations of Shoveler but do on occasions, generally when water levels have remained relatively low into this period (numerous other factors also likely to influence 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
Northern Shoveler	Non-breeding	Winter / Autumn passage													Includes analysis of SPA WeBS Counts 2010-2018 (available from BTO)

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: A056. *Anas clypeata*; Northern Shoveler (Non-breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Non-breeding population	Population abundance	Maintain the size of the non-breeding population at a level which is above 503, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	<p>This will sustain the site's population and contribute to a viable local, national and bio-geographic population. Due to the mobility of birds and the dynamic nature of population change, the target-value given for the abundance 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 abundance 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 (generally at least 10 years). 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.</p> <p>Given the likely fluctuations in numbers over time, any impact-assessments should focus on the current abundance 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.</p> <p>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</p>	<p>Chew Valley Lake SPA JNCC standard data form</p> <p>BTO WeBS data</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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 endeavour to keep these values as up to date as possible, local Natural England staff can advise on whether the figures stated are the best available.</p> <p>The 5 year mean peak count used at the time of designation was 503 for the period 1991/92 – 1994/95. Current 5 year mean peak count for 2014/15 – 2018/19 (incomplete) is 432.</p> <p>The site is not well known for breeding populations as this has been very rare, however one brood of 8 young all fledged in 2007 – this was the first confirmed breeding since 1992.</p> <p>A short-term medium WeBS Alert remains in place for Shoveler at Chew Valley Lake with inferences that some of this may be due to site-specific influences which are as yet unconfirmed. Numbers can fluctuate significantly year on year and there are a very large and very broad range of potential factors that can and will influence this. Gaining a better understanding of these site-specific factors could significantly help in understanding how to inform management and other activities at the lake to account for and improve conditions for features of interest.</p>	
Supporting habitat (both within and outside the SPA): extent and	Extent and distribution of supporting non-breeding habitat	Maintain the extent and distribution of suitable habitat (either within or outside the site boundary) which supports the feature for all necessary stages of the non-breeding/wintering	Conserving or restoring the extent of supporting habitats and their range 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	<p>Bristol Water maps & data in archive Natural England SSSI scientific files. Data may be available upon request</p> <p>BTO species threshold levels 2015-16</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
distribution		<p>period (moulting, roosting, loafing, feeding)</p> <p>Approximately 485ha of open water when full</p>	<p>data collection. This target may apply to supporting habitat which also lies outside the site boundary.</p> <p>The determination of the quantity of supporting habitat for any one individual species is difficult to define when considering site specific factors against requirements for full open water / fringing habitat / a specific depth of water to provide muddy substrates and provide appropriate food/prey. There is no known single figure or pattern for water levels specifically to provide the best conditions for Shoveler alone. To pursue this would be to the detriment of large numbers of other species for which the site is also nationally important.</p> <p>The following form part of the SSSI designation confirming nationally important populations: Gadwall (at populations that occasionally qualify as internationally important); Great crested grebe; Little grebe; Teal; and Coot. Other species with populations of nationally importance but not currently part of the SSSI designation include: Pochard; Tufted duck; Cormorant. The lake is also known as a very significant winter roost for gulls including nationally important populations for Black-headed gull, Common gull and Lesser black-backed gull; again these would qualify as SSSI features but do not currently form part of the designation.</p> <p>Ideally, further research should be done to understand the optimum conditions for each species and come to an agreed consensus on the extents and distributions of different habitats in consideration of all interest features.</p> <p>'Undisturbed' open waters estimated at around 70ha which includes the nature reserve area at Herriot's End/Stratford Bay and Herriot's Mill Pool, plus the ends of Heron's Green Bay and Villice Bay.</p>	<p>BTO WeBS counts 2013-2018</p> <p>Burton, N.H.K., Maclean, I.M.D. & Austin, G.E. (2007). An assessment of the feasibility of annual monitoring of winter gull roosts in the UK and possible outputs from such a scheme. BTO Research Report No. 483</p> <p>CVLbirding website (accessed 2018) http://www.cvlbirding.co.uk/bird-counts/home.html</p> <p>Chew Valley Lake SPA Site Improvement Plan (SIP), available at: http://publications.naturalengland.org.uk/publication/4517832196882432</p> <p>T Lane (2018) Pers Comm</p>
Supporting habitat (both within	Air quality	Maintain concentrations and deposition of air pollutants to at or below the site-relevant Critical	The structure and function of habitats which support this SPA feature may be sensitive to changes in air quality. Exceeding critical values for air pollutants may result in	More information about site-relevant Critical Loads and Levels for this SPA is available by using the 'search by

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
and outside the SPA): function/ supporting process		Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	<p>changes to the chemical status of its habitat substrate, accelerating or damaging plant growth, altering vegetation structure and composition and thereby affecting the quality and availability of nesting, feeding or roosting habitats.</p> <p>Critical Loads and Levels are thresholds below which such harmful effects on sensitive UK habitats will not occur to a noteworthy level, according to current levels of scientific understanding. There are critical levels for ammonia (NH₃), oxides of nitrogen (NO_x) and sulphur dioxide (SO₂), and critical loads for nutrient nitrogen deposition and acid deposition. It is recognised that achieving this target may be subject to the development, availability and effectiveness of abatement technology and measures to tackle diffuse air pollution, within realistic timescales. There are currently no critical loads or levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or Dusts. These should be considered as appropriate on a case-by-case basis.</p> <p>Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-natural habitats are still under development.</p>	site' tool on the Air Pollution Information System (www.apis.ac.uk).
Supporting habitat (both within and outside the SPA): function/ supporting process	Connectivity with supporting habitats	Maintain the safe passage of birds moving between roosting and feeding areas	The ability of the feature to safely and successfully move to and from feeding and roosting areas is critical to their breeding success and to the adult fitness and survival. This target will apply within the site boundary and where birds regularly move to and from off-site habitat where this is relevant.	
Supporting habitat (both within and outside the SPA): function/ supporting	Conservation measures	Maintain management or other measures (whether within and/or outside the site boundary as appropriate) necessary to Maintain the structure, function and/or the supporting processes associated with the feature and	<p>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.</p> <p>Further details about the necessary conservation</p>	Natural England SSSI Views About Management (VAM) & SPA Site Improvement Plan (SIP), both available from https://designatedsites.naturalengland.org.uk/

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
process		its supporting habitats.	measures for this site will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements.	
Supporting habitat (both within and outside the SPA): function/ supporting process	Food availability within supporting habitat	Maintain high cover/abundance of preferred food plants (e.g. club-rushes and bulrushes (<i>Scirpus</i> spp.), spikerushes (<i>Eleocharis</i> spp.), true sedges (<i>Carex</i> spp.), pondweeds (<i>Potamogeton</i> spp.), sweet-grass (<i>Glyceria</i>), surface plankton.	The availability of an abundant food supply is critically important for adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (both within and outside the SPA): function/ supporting process	Food availability within supporting habitat	Maintain the distribution, abundance and availability of key prey items (e.g. <i>Hydrobia</i> , crustaceans, caddisflies, <i>diptera</i> , beetles) at preferred prey sizes.	The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (both within and outside the SPA): function/ supporting process	Water depth	Maintain the availability of standing water at varying depth with seasonal fluctuations. Maximum depth when full = 37 feet (approx. 11.28m) Average depth when full = 14 feet (approx. 4.27m).	This feature is known to require extensive areas of water in which to feed. Birds are visual predators, with some having the ability to dive or to feed from the surface. As they will rely on detecting their prey within the water to hunt, the depth of water at critical times of year may be paramount for successful feeding and therefore their fitness and survival. Deep water surrounding nesting sites may also be important to deterring predators. Water levels will fluctuate with weather conditions and through water supply use. Seasonal differences, for example where the lake reduces to 50% capacity during dry periods, or remains full for longer, provides very different conditions favouring different species. Chew Valley Lake is known as an important site for a broad	Bristol Water maps & data in archived Natural England SSSI scientific files. Data may be available upon request BTO species threshold levels 2015-16 BTO WeBS counts 2013-2018 Burton, N.H.K., Maclean, I.M.D. & Austin, G.E. (2007). An assessment of the feasibility of annual monitoring of winter gull roosts in the UK and possible outputs from such a scheme. BTO Research Report No. 483

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>range of species during the autumn passage / winter period.</p> <p>The following form part of the SSSI designation confirming nationally important populations: Gadwall (at populations that occasionally qualify as internationally important); Great crested grebe; Little grebe; Teal; and Coot. Other species with populations of national importance but not currently part of the SSSI designation include: Pochard; Tufted duck; Cormorant. The lake is also known as a very significant winter roost for gulls including nationally important populations for Black-headed gull, Common gull and Lesser black-backed gull; again these would qualify as SSSI features but do not currently form part of the designation.</p> <p>There is no known single figure or pattern for water levels specifically to provide the best conditions for Shoveler alone. To pursue this would be to the detriment of large numbers of other species for which the site is also nationally important (as above). Ideally, further research should be done to associate best conditions for each species at this site and then a consensus agreed for best water levels for the site on balance.</p> <p>Otherwise there should be no change to the water retention regime without broad consultation and agreement with Natural England.</p>	<p>CVLbirding website (accessed 2018) http://www.cvlbirding.co.uk/bird-counts/home.html</p> <p>T Lane (2018) Pers Comm</p>
Supporting habitat (both within and outside the SPA): function/ supporting process	Water quality /quantity	<p>Where the supporting habitats of the SPA feature are dependent on surface water ensure water quality and quantity is restored to a standard which provides the necessary conditions to support the feature.</p> <p>Restore the nutrient status to a consistent position of Good Ecological Status and/or below</p>	<p>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.</p> <p>Typically, meeting the surface water and groundwater environmental standards set out by the Water Framework</p>	<p>EA water quality data in archived Natural England SSSI files.</p> <p>CVL birding website (accessed 2018) http://www.cvlbirding.co.uk/bird-counts/home.html</p> <p>T Lane (2018) Pers Comm</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p>100µg/l total Phosphate (whichever is lowest).</p> <p>There should be no increase in the frequency or severity of blue-green or green algal blooms.</p>	<p>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 may be required to establish appropriate standards for the SPA.</p> <p>Chew Valley Lake is known to be highly eutrophic and exhibits blue-green / green algal blooms due to high nutrient levels. This has the potential to impact upon food provision but is thought to be of less importance to Shoveler than water quantity.</p> <p>The impacts of water quantity are not well documented specifically at this site for Shoveler but can be hypothesised from correlations as lower lake levels seeming to correspond with higher counts over winter. It is also difficult to set figures for this part of the attribute due to the site's use as a reservoir with potentially overriding public interest to supply water to Bristol and other nearby conurbations, natural fluctuations in rainfall, and the dam infrastructure and need to provide compensation flow impacting on the ability to control water levels.</p>	
Supporting habitat (both within and outside the SPA): minimising disturbance	Minimising disturbance caused by human activity	<p>Manage the frequency, duration and/or intensity of disturbance affecting roosting, foraging, feeding, moulting and/or loafing birds so that the feature is not significantly disturbed</p>	<p>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, light, sound, vibration, trampling, presence of people, animals and structures.</p>	<p>Tuite, C.H., Hanson, P.R. & Owen, M. (1984). Some ecological factors affecting winter wildfowl distribution on inland Waters in England and Wales, and the influence of water-based recreation. <i>J. Appl. Ecol.</i>, 21: 41-62.</p> <p>Bell, D. V. & Austin, L. W. (1985). The Game-Fishing Season and Its Effects on Overwintering Wildfowl. <i>Biological Conservation</i>, 33: 65-80</p> <p>WATERFOWL MANAGEMENT HANDBOOK: Human Disturbances of Waterfowl: Causes, Effects, and Management. <i>Fish and Wildlife</i></p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Shoveler are identified in studies as being particularly susceptible to disturbance (Blanc <i>et al.</i> 2006, referencing Platteeuw & Henkens 1997 and Tuite <i>et al.</i> 1984).</p> <p>Large numbers of people use the area for recreational activities including trout fishing, sailing and walking, much of this from when the lake was first created. Numerous studies have investigated the impact of recreational activities with regard to disturbance, and numerous studies have been undertaken at Chew Valley Lake in response to the ongoing fishing activities (and especially when changes are proposed). A zoning scheme for fishing and sailing minimises any adverse impacts on the wildlife and is frequently shown to be of principal importance in retaining the site's interests. It is extremely difficult to isolate disturbance from other contributory factors including site specific factors, weather, temperature, season, individual differences <i>etc.</i> As such it remains unclear whether the current levels of disturbance exhibited on Chew Valley Lake is limiting the carrying capacity of the site for Shoveler and/or other species.</p> <p>Additional research to investigate site-specific factors (including existing use) at this site would be beneficial (e.g. what the carrying capacity may be if there was no disturbance present, then assessing present site management with an aim to maximise suitability of the site given the activities present). Existing mitigation measures should remain in place, monitoring should continue, and any proposals which could increase disturbance levels (especially existing refuge areas) will require careful review and potentially increases in refuge provision when looking at mitigation.</p>	<p><i>Leaflet</i>. 13.2.15. 1992</p> <p>Platteeuw, M. & Henkens, J.H.G. (1997). Possible impact of disturbance to waterbirds: individuals, carrying capacity and populations. <i>Wildfowl</i>, 48: 225-236.</p> <p>Martin, J. P. M. (1998). An investigation into the effects of extending the fishing season at Chew Valley and Blagdon Lakes Autumn. Avon Wildlife Trust</p> <p>Klee, C. (2002). A Study of disturbance to birds during pike fishing trials at Chew Valley Lake, Somerset. Report to English Nature.</p> <p>Klee, C. (2003). Bird Survey of Moreton Bank and Point at Chew Valley Lake 12th October to 30th November 2002</p> <p>Blanc, R., Guillemain, M., Mouronval, J., Desmonts, D. & Fritz, H. (2006). Effects of non-consumptive leisure disturbance to wildlife. <i>Rev. Écol. (Terre Vie)</i>, 61: 117-133.</p> <p>Burton, N. H. K. (2007). Landscape approaches to studying the effects of disturbance on waterbirds. <i>Ibis</i>, 149 (Suppl. 1): 95-101</p> <p>Klee, C. (2007). Bank angling and bird disturbance at Chew and Blagdon, December 2006</p> <p>Klee, C. Bird disturbance study at</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
				<p>Chew – Pike fishing No 1 2nd February 2009</p> <p>Pike fishing at Chew Valley Lake, disturbance studies. Wessex Ecological Consultancy, 2010</p>
<p>Version Control Advice last updated: 15 February 2019. Following stakeholder comments detail added to 'Population abundance' and 'Minimising disturbance caused by human activity' attributes.</p>				
<p>Variations from national feature-framework of integrity-guidance: N/A</p>				