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

Portholme Special Area of Conservation (SAC) UK0030054

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About this document

This document provides Natural England's supplementary advice about the European Site Conservation Objectives relating to Portholme SAC.

This advice should therefore be read together with the SAC 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'

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	Portholme Special Area of Conservation (SAC)
Location	Cambridgeshire
Site Map	The designated boundary of this site can be viewed here on the MAGIC website
Designation Date	*1 April 2005*
Qualifying Features	See section below
Designation Area	*91.93 hectares*
Designation Changes	*Not applicable*
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)	Portholme SSSI
Relationship with other European or International Site designations	Not applicable.

Site background and geography

Covering approximately 91 hectares, Portholme SAC is located in the Bedfordshire and Cambridgeshire Claylands National Character Area (88), adjacent to the River Great Ouse south of Huntington and north-west of Godmanchester. The River Great Ouse forms its southern and eastern boundaries, whilst its northern boundary is formed by the Alconbury Brook. A small ditch forms the western boundary. These waterbodies are important for dragonflies *(Odonata)* in particular the restricted dragonfly *Libellula fulva.*

Portholme Meadow lies over a bed of calcareous Oxford Clay deposited some 160 million years ago during the Jurassic Period. This layer can be up to 70 m thick in places. One of the most extensive glaciations, the Anglian Glaciation, stretched as far south as London. Lasting from about 500,000 to 425,000 years ago, the ice was up to 1,000 metres thick in the north. During periods when the ice melted, sand and gravel washed into the river valley to create the deep bed of gravel and mixed deposits, which underlie the meadow today

In winter and early spring Portholme may become inundated by flood water. The occurrence and duration of this flooding can be very variable. Flooding provides natural fertilising of the soil and it is this seasonal flooding coupled with the traditional management that maintains the diversity of natural plant communities.

Portholme supports grassland communities of the alluvial flood meadow type. It represents one of the largest areas of this grassland type in the country which continues to be managed on traditional lines as a 'lammas' meadow. It supports species rich grassland communities including populations of two nationally scare plant species narrow-leaved water-dropwort *Oenanthe silaifolia* and marsh dandelion

Taraxacum palustre. It also supports a small population of the nationally scarce snake's head fritillary *Fritillaria meleagris.*

The traditional management of this site, is by hay cutting in mid-summer, followed by grazing of the aftermath in late summer until the autumn. This management allows plants to flower and set seed prior to hay cutting.

About the qualifying features of the SAC

The following section gives you additional, site-specific information about this SAC's qualifying features. These are the natural habitats and/or species for which this SAC has been designated.

Qualifying habitats:

- **H6510 Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)**

This Annex I type comprises species-rich hay meadows on moderately fertile soils of river and tributary floodplains. Most examples are cut annually for hay, with light aftermath grazing. Seasonal flooding maintains an input of nutrients.

In the UK, this habitat corresponds to NVC type MG4 *Alopecurus pratensis – Sanguisorba officinalis* grassland (Rodwell, 1991). This community is characterised by species-rich swards containing frequent red fescue *Festuca rubra*, crested dog's-tail *Cynosurus cristatus*, meadow foxtail *Alopecurus pratensis,* great burnet *Sanguisorba officinalis*, meadowsweet *Filipendula ulmaria* and meadow buttercup *Ranunculus acris*. It provides the main habitat in the UK for the fritillary *Fritillaria meleagri*s.

Portholme is the largest surviving traditionally managed lowland hay meadow in the UK, with an area of 104 ha of alluvial flood meadow (7% of the total UK resource). There has been a long history of favourable management and very little of the site has suffered from agricultural improvement, and so it demonstrates good conservation of structure and function. It supports a small population of fritillary *Fritllaria meleagris.*

Qualifying Species:

N/A

Table 1: Supplementary Advice for Qualifying Features: H6510. Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	**Extent of the feature within the site**	Restore the total extent of the H6510 feature to 88ha.	There should be no measurable reduction (excluding any trivial loss) in the extent and area of this feature, and in some cases, the full extent of the feature may need to be restored. The baseline-value of extent given has been generated using data gathered from the listed site-based surveys. MG4 extent from the 1997 and 2003 NVC surveys; LAMBERT, S 1997 & 2003. Area measurements given may be approximate depending on the methods used, age and accuracy of data collection, and as a result this value may be updated in future to reflect more accurate information. The extent of an Annex I habitat feature covers the sum extent of all of the component vegetation communities present and may include transitions and mosaics with other closely-associated habitat features. Where a feature is susceptible to natural dynamic processes, there may be acceptable variations in its extent through natural fluctuations. Where a reduction in the extent of a feature is considered necessary to meet the Conservation Objective for another Annex I feature, Natural England will advise on this on a case-by-case basis. For this feature, there will be year to year fluctuations in climate resulting in variable flooding regimes. This may mean that there will need to be some allowance for reversible shifts in vegetation types between MG4 (H6510) and wetter vegetation types such as inundation grasslands (e.g. MG13, MG7c) and MG8 and related vegetation depending on the flood cycle. These natural variations in extent have been documented in GOWING, D and WALLACE, H 2015 and GOWING, D 2018. The extent of the feature is largely based upon data from the NVC survey's; LAMBERT, S 1997 and 2003. The grassland communities are dynamic, varying between seasons due to flood and groundwater conditions, as documented in GOWING, D *et al* 2002, ENTECH 2006 & 2007, GOWING, D & WALLACE, H 2015 and GOWING, D 2018.	ENTECH 2006 & 2007 GOWING, D *et al* 2002. GOWING, D & WALLACE, H. 2015. GOWING, D 2018. LAMBERT, S. 1997. LAMBERT, S 2003.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	**Spatial distribution of the feature within the site**	Maintain the distribution and configuration of the feature, including where applicable its component vegetation types, across the site	A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes. This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to disperse throughout the site. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat. Smaller fragments of habitat can typically support smaller and more isolated populations which are more vulnerable to extinction. These fragments also have a greater amount of open edge habitat which will differ in the amount of light, temperature, wind, and even noise that it receives compared to its interior. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.	
Structure and function (including its typical species)	**Vegetation community composition**	Ensure the component vegetation communities of the feature are referable to and characterised by the following National Vegetation Classification type MG4 *Alopecurus pratensis - Sanguisorba officinalis* grassland	This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC). Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. This will also help to conserve their typical plant species (i.e. the constant and preferential species of a community), and therefore that of the SAC feature, at appropriate levels (recognising natural fluctuations).	LAMBERT, S. 1997 LAMBERT, S. 2003 GOWING, D & WALLACE, H. 2015. GOWING, D 2018. . Annual botanical surveys from the floodplain meadow. Available on request from the Floodplain Meadow Partnership. Natural England (2008) Definitions of Favourable Condition – Portholme Meadow SSSI (Consultation Draft). Available on request from Natural England

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
				This attribute will be periodically monitored as part of Natural England's site condition assessments
Structure and function (including its typical species)	**Key structural, influential and/or distinctive species**	Maintain the abundance of the typical species listed below to enable each of them to be a viable component of the H6510 habitat; • The constant and preferential plants of the NVC community type which forms a key component of a SAC habitat that is present • MG4 *Alopecurus pratensis - Sanguisorba officinalis* grassland • Snake's head fritillary *Fritillaria meleagris*. .	Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include; • **Structural** species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). • **Influential** species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat) • **Site-distinctive** species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary. The list of species given here for this Annex I habitat feature at this SAC is not necessarily exhaustive. The list may evolve, and species may be added or deleted, as new information about this site becomes available.	This attribute will be periodically monitored as part of Natural England's site condition assessments
Structure and function (including its typical species)	**Vegetation: undesirable species**	Maintain the frequency/cover of the following undesirable species to within acceptable levels and prevent changes in surface condition, soils, nutrient levels or hydrology which may encourage	Undesirable non-woody and woody vascular plants species may require active management to avert an unwanted succession to a different and less desirable state. Often they may be indicative of a negative trend relating to another aspect of a site's structure and function. These species will vary depending on the nature of the particular feature, and in some	Natural England (2008) Definitions of Favourable Condition – Portholme Meadow SSSI (Consultation Draft). Available on request from Natural England

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		their spread	cases these species may be natural/acceptable components or even dominants. This feature is sensitive to prolonged waterlogging and some species listed here are indicative of this. This is discussed in GOWING, D *et al* 2002, GOWING, D & LAMBERT, S 2003, GOWING, D & WALLACE, H 2015 and GOWING, D 2018. Undesirable species include: Cow parsley *Anthriscus sylvestris*, creeping thistle *Cirsium arvense,* spear thistle *Cirsium vulgare*, curled dock *Rumex crispus,* broad-leaved dock *Rumex obtusifolius,* common ragwort *Senecio jacobaea*, Common nettle *Urtica dioica*, field horsetail *Equisetum arvense,* rushes *Juncus spp,* false oat-grass *Arrhenatherum elatius,* cat grass *Dactylis glomerata,* tufted hairgrass *Deschampsia cespitosa,* sedges *(*large *Carex* spp.*,* lesser pond sedge *Carex acutiformis,* reed sweet grass *Glyceria maxima,* reed canary-grass *Phalaris arundinacea and* common reed *Phragmites australis*	This attribute will be periodically monitored as part of Natural England's site condition assessments GOWING, D *et al* 2002 . GOWING, D & LAMBERT, S 2003. GOWING, D & WALLACE, H 2015. GOWING, D 2018.
Structure and function (including its typical species)	**Vegetation community transitions**	Maintain the pattern of natural vegetation zonations/transitions within the H6510 feature	Transitions/zonations between adjacent but different vegetation communities are usually related to naturally-occurring changes in soil, aspect or slope. Such 'ecotones' retain characteristics of each bordering community and can add value in often containing species not found in the adjacent communities. Retaining such transitions can provide further diversity to the habitat feature, and support additional flora and fauna. As stated above the component MG4 vegetation community grades imperceptibly into adjacent related vegetation communities, the exact location of these transitions can vary from year to year as result of prevailing conditions particularly relating to flooding and soil moisture content GOWING, D & WALLACE, H 2015 and GOWING, D 2018.	GOWING, D & WALLACE H 2015. GOWING, D 2018.
Structure and function (including its typical species)	**Soils, substrate and nutrient cycling**	Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the	Soil is the foundation of basic ecosystem function and a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms. Soil biodiversity has a vital role in recycling organic matter.	ENTECH UK LIMITED 2006 AND 2007 GOWING, D & LAMBERT, S 2003

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		habitat. For this feature soil P index should typically be between index 0 and 1 (< 15 mg l -1)	Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature. Prolonged periods of flooding at Portholme have significantly increased the soil P index in parts of the meadow. Prolonged increases in P index may have a detrimental effect on the plant community. ENTECH 2006 AND 2007, GOWING, D & LAMBERT, S 2003.	GOWING, D & WALLACE, H 2015. GOWING, D 2018
Structure and function (including its typical species)	**Water quality**	Where the feature is dependent on surface water and/or groundwater, restore water quality and quantity to a standard which provides the necessary conditions to support the H6510 feature	For many SAC features which are dependent on wetland habitats supported by surface and/or ground water, maintaining the quality and quantity of water supply will be critical, especially at certain times of year. Poor water quality and inadequate quantities of water can adversely affect the structure and function of this habitat type. 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 achievement of SAC Conservation Objectives but in some cases more stringent standards may be needed. Further site-specific investigations may be required to establish appropriate water quality standards for the SAC. For this Annex 1 feature the deposition of nutrients particularly phosphate, as sediment in floodwaters have the potential to impact the site, as discussed in ENTECH 2006, 2007, GOWING, D & LAMBERT, S 2003 AND GOWING, D & WALLACE, H 2015 and GOWING, D 2018.	ENTECH UK LIMITED 2006 AND 2007 GOWING, D & LAMBERT, S 2003 GOWING, D & WALLACE, H 2015 GOWING, D 2018 NATURAL ENGLAND, 2014 SITE IMPROVNMENT PLAN:PORTHOLME (SIP177) NATURAL ENGLAND, 2015. OUSE WASHES AND PORTHOLME SSSI WATER POLLUTION PLAN.
Structure and function (including its typical species)	**Hydrology: Water table**	Restore a hydrological regime which provides a consistently near-surface water table which typically averages depths of 35 cm (winter), 45cm (spring), 70cm (summer) and 60cm (autumn) below ground level	Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts. For this feature sub-surface water table	GOWING, D & LAMBERT, S 2003 GOWING, D & WALLACE, H 2015 GOWING, D 2018

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			levels during the year should be at levels consistent with published guidance. The flooding regime has been problematic for this site and in some years and on certain parts of the meadow it has led to a shift away from the H6510 plant community The main issue is caused in years when the site has experienced serve and prolonged flooding during the winter and the nutrient enrichment associated with these prolonged flood events. There is no control over the water levels at Portholme but a ditch has been reinstated to remove flood waters faster. This is discussed in GOWING, D *et al* 2003, GOWING, D & WALLACE, H 2015 and GOWING, D 2018.	
Structure and function (including its typical species)	**Hydrology: Flooding regime**	Restore a hydrological regime which provides a cumulative duration of annual surface flooding which is typically less than 10 days between December-February and less than 3 days between September-November, with no inundations during March – August, subject to natural changes.	Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts. For this feature, the timing, frequency, extent and duration of surface flooding should be commensurate with maintenance of the feature at this site. A non-optimal flooding regime can result in a shift from H6510 to other vegetation types (such as inundation grassland, swamps). Too little flooding may compromise the necessary conservation/agricultural management due to reduced nutrient inputs which will reduce hay yields making hay managment less viable and sustainable. The flooding regime has been problematic for this site and in some years and on certain parts of the meadow it has led to a shift away from the H6510 plant community The main issue is caused in years when the site has experienced serve and prolonged flooding during the winter and the nutrient enrichment associated with these prolonged flood events.	GOWING, D *et al* 2003 GOWING, D & WALLACE, H 2015 NATURAL ENGLAND, 2014 SITE IMPROVNMENT PLAN:PORTHOLME (SIP177) NATURAL ENGLAND, 2015. OUSE WASHES AND PORTHOLME SSSI WATER POLLUTION PLAN.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			There is no control over the water levels at Portholme but a ditch has been reinstated to remove flood waters faster. This is discussed in GOWING, D *et al* 2003, GOWING, D & WALLACE, H 2015 and GOWING, D 2018.	
Structure and function (including its typical species)	**Hydrology**	At a site, unit and/or catchment level (as necessary, restore natural hydrological processes to provide the conditions necessary to sustain the feature within the site	Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts. For this feature surface flooding regime and sub-surface irrigation via gravel aquifers can be affected by land use change, water abstraction, flood alleviation, development and mineral extraction in the catchment. The flooding regime has been problematic for this site and in some years and on certain parts of the meadow it has led to a shift away from the H6510 plant community The main issue is caused in years when the site has experienced serve and prolonged flooding during the winter and the nutrient enrichment associated with these prolonged flood events. There is no control over the water levels at Portholme but ditches have been reinstated to remove flood waters faster. This is discussed in GOWING, D *et al* 2003, GOWING, D & WALLACE, H 2015 and GOWING, D 2018.	GOWING, D & LAMBERT, S 2003 GOWING, D & WALLACE, H 2015 GOWING, D 2018
Structure and function (including its typical species)	**Functional connectivity with wider landscape**	Maintain the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site	This recognises the potential need at this site to maintain or restore the connectivity of the site to its wider landscape in order to meet the conservation objectives. These connections may take the form of landscape features, such as habitat patches, hedges, watercourses and verges, outside of the designated site boundary which are either important for the migration, dispersal and genetic exchange of those typical species closely associated with qualifying Annex I habitat features of the site. These features may also be important to the operation of the supporting ecological processes on which	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			the designated site and its features may rely. In most cases increasing actual and functional landscape-scale connectivity would be beneficial. Where there is a lack of detailed knowledge of the connectivity requirements of the qualifying feature, Natural England will advise as to whether these are applicable on a case by case basis.	
Structure and function (including its typical species)	**Adaptation and resilience**	Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site	This recognises the increasing likelihood of natural habitat features to absorb or adapt to wider environmental changes. Resilience may be described as the ability of an ecological system to cope with, and adapt to environmental stress and change whilst retaining the same basic structure and ways of functioning. Such environmental changes may include changes in sea levels, precipitation and temperature for example, which are likely to affect the extent, distribution, composition and functioning of a feature within a site. The vulnerability and response of features to such changes will vary. Using best available information, any necessary or likely adaptation or adjustment by the feature and its management in response to actual or expected climatic change should be allowed for, as far as practicable, in order to ensure the feature's long-term viability. The overall vulnerability of this SAC to climate change has been assessed by Natural England (2015) as being high taking into account the sensitivity, fragmentation, topography and management of its [habitats/supporting habitats]. This means that this site is considered to be to be amongst the most vulnerable sites overall and likely to require the most adaptation action, most urgently. A site based assessment should be carried out as a priority. This means that action to address specific issues is likely to be required, such as reducing habitat fragmentation and minimising damage/degradation through the effects of recreational pressure, creating more habitat to buffer the site or expand the habitat into more varied landscapes and addressing particular management and condition issues. Individual species	NATURAL ENGLAND, 2015. Climate Change Theme Plan and supporting National Biodiversity Climate Change Vulnerability assessments (NBCCVAs) assessments for SACs and SPAs in England. Available at **http://publications.naturalengland.org.uk/publication/4954594591375360**

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			may be more or less vulnerable than their habitat itself. In many cases, change will be inevitable so appropriate monitoring would be advisable.	
Supporting processes (on which the feature relies)	Air quality	Maintain as necessary, the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it. Critical Loads and Levels are recognised thresholds below which such harmful effects on sensitive UK habitats will not occur to a significant level, according to current levels of scientific understanding. There are critical levels for ammonia (NH_3), oxides of nitrogen (NOx) and sulphur dioxide (SO_2), and critical loads for nutrient nitrogen deposition and acid deposition. 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. 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. 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.	More information about site-relevant Critical Loads and Levels for this SAC is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk).
Supporting processes (on which the feature relies)	**Conservation measures**	Maintain the management measures (either within and/or outside the site boundary as appropriate) which are necessary to Maintain the structure, functions and supporting processes associated with the feature	Active and ongoing conservation management is needed to protect, maintain or restore this feature at this site. Further details about the necessary conservation measures for this site can be provided by contacting Natural England. This information 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.	ENGLISH NATURE, 2002 VIEWS ABOUT MANAGEMENT. NATURAL ENGLAND, 2014 SITE IMPROVNMENT PLAN:PORTHOLME (SIP177) NATURAL ENGLAND, 2015. OUSE WASHES AND PORTHOLME SSSI WATER POLLUTION PLAN.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Conservation measures for this feature will typically include grazing, cutting, scrub management, weed control, recreation/visitor management. Also covered is maintenance of surface drainage features such as grips, gutters and foot drains. Retention of suitable land use infrastructure/patterns to enable site management e.g. pastoral livestock farming	
Version Control Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: N/A				

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