



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

**Skipwith Common Special Area of Conservation (SAC)  
Site Code: UK0030276**



Photo credit: Peter Roworth

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## **About this document**

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

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

**This advice replaces a draft version dated 25 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.

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.

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.

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](mailto:HDIRConservationObjectivesNE@naturalengland.org.uk)**

## About this site

### European Site information

<b>Name of European Site</b>	Skipwith Common Special Area of Conservation (SAC)
<b>Location</b>	North Yorkshire
<b>Site Map</b>	The designated boundary of this site can be viewed <a href="#">here</a> on the MAGIC website
<b>Designation Date</b>	01 April 2005
<b>Qualifying Features</b>	See section below
<b>Designation Area</b>	295.20 ha
<b>Designation Changes</b>	None
<b>Feature Condition Status</b>	Details of the feature condition assessments made at this site can be found using Natural England's <a href="#">Designated Sites System</a>
<b>Names of component Sites of Special Scientific Interest (SSSIs)</b>	Skipwith Common SSSI which is also a National Nature Reserve.
<b>Relationship with other European or International Site designations</b>	None

### Site background and geography

Skipwith Common SAC is situated approximately 10 miles south of York within the Humberhead Levels National Character Area ([NCA Profile 39](#)). It is one of only two extensive areas of open heathland in the Vale of York (the other being Strensall Common SAC to the north of York). It is located on a spur of glacial sands which forms the watershed between the valleys of the lower River Derwent to the east and River Ouse to the west. The highest point is 10.46m AOD and the lowest point is 7.80m AOD. The slight fluctuations in height across the Common show no particular trend, but has been influenced both by the natural processes of wind blowing sand and by human activities such as peat-digging and coal-mining subsidence.

The geology of the site consists of a layer of varying thickness (usually 1-2m deep) of post-glacial Aeolian sands overlying a layer of lacustrine laminated clays. The laminated clays overlay a thick belt of glacial boulder clay. The solid geology below these layers consists of a 250m thick belt of Bunter sandstone.

The soils over most of Skipwith Common are classified as Formby and Everingham series sandy gley soils. This is a deep stoneless black sandy soil, although there is widespread evidence of podsolisation across the Common. The northern part of the Common is characterised by Holme Moor/Sandburn gley-podsols. There are surface deposits of Holocene peats varying in thickness from 30-60cm, although it is likely that many deeper deposits have been cut over in the past for fuel. Areas around the concrete runways at the western end of the Common are locally more base-rich.

Skipwith Common has long been recognised for its Nature Conservation Importance and is described in the Nature Conservation review (Ratcliffe 1977) as the largest single tract of wet heathland in the north of England. The Common also supports extensive areas of dry heath and the heathland communities form a complex mosaic across the site together with areas of mire, rush pasture, reed bed and woodland. The Common is renowned for its ornithological and entomological interest. In addition to many commoner woodland birds, heathland specialists include tree pipits, green woodpeckers, woodlark and in some years, nightjars. The wetter parts of the site hold a selection of ducks, whilst water rail is also recorded. The site supports a diverse moth community and 16 species dragonfly and damselfly.

Skipwith Common retains an extensive and intact historic landscape which provides insight into activity here from the Bronze Age to the modern day. It is situated in the centre of an area rich in evidence of prehistoric settlement and activity. Outside the common this evidence is largely known as below-ground features visible as crop-marks, however on the Common the nature of past land management has allowed very significant monuments to survive as upstanding earthworks. The importance of this survival is indicated by the scheduled status of a number of prehistoric burial monuments. Perhaps most notable amongst these are the iron-age square barrows which very rarely survive as such upstanding monuments. An Iron Age or Romano-British enclosure near the northern boundary has also been identified from aerial photography by Historic England. A much later period of activity on the Common is indicated by extensive survival of the WWII Ricall Airfield which existed here. These remains are of regional importance and contribute to our understanding of mid 20th century military activity across the region.

Today, the site is managed as a National Nature Reserve by the owner in partnership with Natural England.

## 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:

- **H4030 European dry heaths**

European dry heaths typically occur on freely-draining, acidic to circumneutral soils with generally low nutrient content. Ericaceous dwarf-shrubs dominate the vegetation. The most common is heather *Calluna vulgaris*, which often occurs in combination with gorse *Ulex* spp., bilberry *Vaccinium* spp. or bell heather *Erica cinerea*, though other dwarf-shrubs are important locally. At Skipwith Common the dry heath element is an example of H9 *Calluna vulgaris* – *Deschampsia flexuosa* heath dominated by heather *Calluna vulgaris*. It is relatively species poor and is considered to be an example of the species poor sub community of this NVC type. The dry heath has significant ornithological importance, with heathland specialists such as tree pipits *Anthus trivialis*, woodlark *Lullula arborea* and nightjar *Caprimulgus europaeus* all being recorded in recent years. A diverse invertebrate fauna is associated with the dry heath communities.

- **H4010 Northern Atlantic wet heaths with *Erica tetralix***

Wet heath usually occurs on acidic, nutrient-poor substrates, such as shallow peats or sandy soils with impeded drainage. The vegetation is typically dominated by mixtures of cross-leaved heath *Erica tetralix*, heather *Calluna vulgaris*, grasses, sedges and *Sphagnum* bog-mosses.

The northern Atlantic wet heath at Skipwith Common is extensive. It largely comprises the M16 *Erica tetralix* – *Sphagnum compactum* wet heath NVC community and is dominated by cross-leaved heath *Erica tetralix* and purple moor-grass *Molinia caerulea*. Again the vegetation is relatively species poor when compared with some southern heaths but there is a small population of marsh gentian *Gentiana pneumonanthe*. The wet heath forms a complex mosaic with; open water, mire, fen, reed swamp and the European dry heath habitat. As with the dry heath communities the wet heath habitat has significant entomological and ornithological importance.

### Qualifying Species:

- None

**Table 1: Supplementary Advice for Qualifying Features: H4010. Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath**

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<b>Extent and distribution of the feature</b>	<b>Extent of the feature within the site</b>	Maintain the total extent of the H4010 feature at approximately 52ha	<p>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. Area measurements given may be approximate depending on the methods, age and accuracy of data collection, and as a result this value may be updated in future to reflect more accurate information.</p> <p>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.</p> <p>Various surveys have been undertaken since the notification of the associated Site of Special Scientific Interest and these have shown considerable variation in the extent of wet and dry heath. Early surveys suggested that the extent of wet heath was as little as 17ha whilst an estimate from 2007 suggested c.88 ha. The Habitats Directive Site Characterisation prepared by Bullen Consultants for the Environment Agency in 2003 estimated that wet heath covered c.20% of the site (c.59ha) and the Natura 2000 standard data form suggests 58.92. The 1993 NVC survey did not quantify extent of heathland communities, but did record extensive areas of NVC community M16 <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath.</p> <p>The increase in extent from the earlier surveys is largely as a result as a result of heathland restoration efforts undertaken in the early 1990s under the auspices of English Nature's Wildlife</p>	<p>Bullen Consultants (2003) Skipwith Common c.SAC Habitats Directive Site Characterisation (Available from Natural England on request)</p> <p>Humphries Rowell Associates (2002) Stanley main Seam &amp; Skipwith Common Baseline Report</p> <p>Julian, S. (1985) Habitat map of Skipwith Common proposed SSSI.</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) (Available from Natural England on request)</p> <p>Small, J. (2007) Major Vegetation Communities</p> <p>Weston A. &amp; Littler J. (1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p>



Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Enhancement Scheme and in the early 2000s as part of the Tomorrows Heathland Heritage, Heritage Lottery Funded (HLF) Project.</p> <p>Within the site wet and dry heathland communities form an intimate mosaic and this also accounts for some of the difference in extent estimates it being very difficult to differentiate between the two habitats and accurately map them. The area in 2007 is however considered an over estimate since this assumed all areas cleared of trees and scrub under the Tomorrows Heathland Heritage HLF Project would develop heathland communities.</p> <p>The 2013 Integrated Sites Assessment clearly indicated this had not been the case with many areas developing into a rush dominated mire vegetation. The 2013 ISA however did demonstrate that the areas of both wet and dry heathland was greater than those at the time of SSSI notification.</p> <p>It is therefore suggested that the 2013 extent figures be taken as a baseline, and these figures have been adopted for this supplementary advice.</p>	
<b>Extent and distribution of the feature</b>	<b>Spatial distribution of the feature within the site</b>	Maintain the distribution and configuration of the feature, including where applicable its component vegetation types, across the site	<p>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 move around the site to occupy and use habitat. 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</p>	<p>Humphries Rowell Associates (2002) Stanley main Seam &amp; Skipwith Common Baseline Report</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available from Natural England on request]</p> <p>Weston A. &amp; Littler J.(1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Annex I habitat feature.</p> <p>Distribution of the wet heath communities corresponds to the distribution of the M16 <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath NVC community.</p> <p>As previous stated the wet and dry heathland communities form an intricate mosaic each blending into the other. Distribution maps of the two communities are provided in the Weston and Littler (1993), Humphries Rowell Associates (2002) and the 2013 Integrated Sites Assessment. The latter survey tended to preferentially classify heath as a wet heath community. When compared with the 2002 assessment however the distribution of the main community types do correspond.</p>	
<b>Structure and function (including its typical species)</b>	<b>Vegetation community transitions</b>	Maintain any areas of transition between this and communities which form other heathland-associated habitats, such as dry and humid heaths, mires, acid grasslands, scrub and woodland.	<p>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. This is an important attribute as many characteristic heathland species utilise the transitions between vegetation types or use different vegetation types during different stages of their life cycle.</p> <p>As stated previously within the site wet and dry heathland communities form a complex mosaic across the site, each blending into the other, together with areas of mire, rush pasture, reed bed and woodland. This transitions provide significant diversity within the site. Distribution maps of the two communities are provided in the Weston and Littler (1993), Humphries Rowell Associates (2002) and the 2013 Integrated Sites Assessment. The 2013 should be taken as the indicative baseline since this indicated distribution post the heathland restoration efforts of the Tomorrow Heathland Heritage Project.</p> <p>Although scrub and woodland are important features of the Common these should not expand at the expense of open</p>	<p>Humphries Rowell Associates (2002) Stanley main Seam &amp; Skipwith Common Baseline Report</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available from Natural England on request</p> <p>Weston A. &amp; Littler J.(1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p> <p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>



Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			heathland, mire and grassland communities.	
<b>Structure and function (including its typical species)</b>	<b>Vegetation community composition</b>	<p>Ensure the component vegetation communities of the feature are referable to and characterised by the following National Vegetation Classification type:</p> <p>M16 <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath (typical sub community)</p>	<p>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).</p> <p>The only detailed NVC survey of the whole Common was undertaken by Weston and Littler (1993) which classified wet heath as M16 <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath (typical sub community). Subsequent surveys have largely simply classified areas as “wet heath”. However wet heath was also classified as M16 in Penny Anderson Associates report (2008).</p> <p>All the heathland communities are relatively species poor. This was noted in the 1977 Nature Conservation Review which stated that the heathland was “rather species poor floristically” and “lacked some of the bryophytes of southern heaths”. The 1993 NVC survey confirmed this, as did the site Characterisation report (Bullen Consultants 2002), Penny Anderson Associates (2008) and the 2013 ISA.</p>	<p>Bullen Consultants (2003) Skipwith Common c.SAC Habitats Directive Site Characterisation.</p> <p>Natural England (2013) Integrated Site Assessment (ISA) Natural England (S. Christian) [Available from Natural England on request]</p> <p>Penny Anderson Associates Limited (2008) Skipwith Common: Impact Of Local Ammonia Emissions. Report to Natural England</p> <p>Ratcliffe D.A (1977) A Nature Conservation Review Vol 2. Weston A. &amp; Littler J (1993). NVC of Skipwith Common SSSI and Strensall Common SSSI</p> <p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>
<b>Structure and function (including its typical species)</b>	<b>Vegetation structure: cover of dwarf shrubs</b>	Maintain an overall cover of dwarf shrub species which is typically between 25-90%	Variations in the structure of the heathland vegetation (vegetation height, amount of canopy closure, and patch structure) is needed to maintain high niche diversity and hence high species richness of characteristic heathland plants and animals. Many species also utilise the transitions between vegetation types or use different vegetation types during different stages of their life cycle. The structural character of the heathland feature is strongly influenced by the growing habits	This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			of its dominant species which in most cases will be ericoids (i.e. plants that look like heathers, including members of the <i>Ericaceae</i> and <i>Empetraceae</i> families). The ericaceous species heather or ling <i>Calluna vulgaris</i> , bell heather <i>Erica cinerea</i> , cross-leaved heath <i>Erica tetralix</i> , are the commonest and most characteristic dwarf-shrubs occurring at Skipwith Common.	
<b>Structure and function (including its typical species)</b>	<b>Vegetation structure: heather age structure</b>	Restore a diverse age structure amongst the ericaceous shrubs typically found on the site	<p>Each phase of growth associated with the characteristic heathers which dominate this feature also represents different microclimatic conditions and microhabitats which may provide shelter or food to other organisms. Therefore, it is important to maintain a mosaic of heather in different phases of growth. Typically this age structure will consist of between 10-40% cover of (pseudo) pioneer heathers; 20-80% cover of building/mature heathers; &lt;30% cover of degenerate heathers and less than &lt;10% cover of dead heathers</p> <p>The 2013 Integrated Site Assessment (ISA) undertaken by Natural England identified that some units had low densities of mature heather and therefore were not meeting age structure requirements for favourable condition</p>	<p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available from Natural England on request]</p> <p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>
<b>Structure and function (including its typical species)</b>	<b>Vegetation structure: cover of gorse</b>	Cover of common gorse is low typically at <10%	<p>Gorse as a component of heathland is a very valuable wildlife habitat, and often a marker of relict heath and common. Both dense and spiny, it provides good, protected cover for many wildlife species: birds, mammals and reptiles; breeding habitat for rare or declining bird species, and excellent winter roosting. The flowers, borne at a time of year when other sources of pollen or nectar are in short supply, are particularly good for insects and other invertebrate pollinators. However gorse may cause problems if unchecked by dominating an area, eliminating other typical heathland species. Mature stands en masse may also be serious fire hazards.</p> <p>Gorse is relatively scarce on Skipwith Common.</p>	This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a>
<b>Structure and function (including its typical species)</b>	<b>Vegetation structure: tree cover</b>	Maintain the open character of the feature, with a typically scattered and low cover of trees and scrub <20% cover.	Scrub (mainly trees or tree saplings above 1 m in height) and isolated trees are usually very important in providing warmth, shelter, cover, food plants, perches, territorial markers and sources of prey for typical heathland invertebrates and vertebrates. But overall cover of scrub and trees across this habitat feature should be maintained or restored to a fairly	<p>Small, J. (2007) Major Vegetation Communities, Natural England archive files available on request.</p> <p>Natural England (2013) Integrated Site Assessment (ISA)</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>sparse level, with a structurally complex edge and with characteristic heathland vegetation as ground cover. If scrub is locally important for any associated species with their own specific conservation objectives, then a higher level of cover will be acceptable. The area of scrub/tree cover should be stable or not increasing as a whole.</p> <p>Although scrub and woodland are important features of Skipwith Common these should not expand at the expense of open heathland, mire and grassland communities.</p> <p>An assessment of woodland cover was made by aerial photograph interpretation in 2007 (Small 2007) following the last phase of extensive woodland /scrub clearance undertaken under the auspices of the Tomorrow's Heathland Heritage Project. This estimated c.116ha of woodland. By extrapolation the 2013 ISA survey suggests just over 100ha of woodland cover.</p> <p>A woodland Management Plans produced as part of a Countryside Stewardship Application in 2017 (Willison A.) estimated 138 ha of woodland cover however this included <b>35.6ha</b> areas of "birch wood pasture" which is likely to have been classified as heathland in previous assessments. If this area is excluded woodland cover would be 102.4ha</p> <p>Given past assessments and for the purposes of this advice woodland cover should not exceed the 116ha reported in 2007 (This excludes areas of birch wood pasture included in the overall woodland cover estimate included within the woodland management plan).</p> <p>The open character dry heath areas should be retained, with a typically scattered and low cover of trees and scrub (&lt;20% cover) as specified by the target.</p>	<p>Natural England (S. Christian) (Available from Natural England on request)</p> <p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>
<b>Structure and function (including its typical</b>	<b>Vegetation composition: bracken cover</b>	Maintain a cover of dense bracken which is low, typically at <5%	The spread of bracken <i>Pteridium aquilinum</i> is a problem on many lowland heathlands. The unpalatable nature and density of bracken as a tall-herb fern, and its decomposing litter, can smother and shade out smaller and more characteristic	Bullen Consultants (2003) Skipwith Common c.SAC Habitats Directive Site Characterisation.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
species)			<p>heathland vegetation. Usually active management of bracken is required to reduce or contain its cover across this habitat feature. But this fern has also some nature conservation value, for example on sites where fritillary butterflies occur and utilise bracken litter habitat.</p> <p>Bracken stands have been mapped in 1991 (English Nature, quoted in Bullen Consultants 2003), Weston and Littler (1993), (2002) and the 2013 Integrated Sites Assessment. Stands tend to be restricted to the drier fringes of the Common and for the most part are long established. The vegetation estimates (Small 2007) estimated extent as 8.8ha and this corresponds with figures from 1985 and 1991 quoted in the SAC site Characterisation report (Bullen Consultants 2003). The majority of bracken stands appear to have been long established. The 2018 ISA reported a slightly higher area of c.16ha and is thought to be most accurate being determined through site survey and aerial photograph interpretation. This is therefore taken as baseline.</p>	<p>Humphries Rowell Associates (2002) Stanley main Seam &amp; Skipwith Common Baseline Report</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available from Natural England on request</p> <p>Weston A. &amp; Littler J.(1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p> <p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>
Structure and function (including its typical species)	Key structural, influential and/or distinctive species	<p>Maintain and/or restore the abundance of the typical species listed below to enable each of them to be a viable component of the Annex 1 habitat;</p> <ul style="list-style-type: none"> <li>Constant and preferential plant species of M16 NVC vegetation types at this SAC</li> <li>Marsh Gentian <i>Gentiana pneumonanthe</i></li> <li>Pilwort <i>Pilularia globulifera</i></li> </ul>	<p>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;</p> <ul style="list-style-type: none"> <li><b>Structural</b> 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').</li> <li><b>Influential</b> 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)</li> <li><b>Site-distinctive</b> species which are considered to be a particularly special and distinguishing component of an Annex I</li> </ul>	<p>Ratcliffe D.A. (1977) A Nature Conservation Review Vol 2.</p> <p>Rodwell, J.S. (1991) British Plant Communities (Volume 2) Mires and Heaths</p> <p>Weston A. &amp; Littler J. (1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p> <p>Bullen Consultants (2003) Skipwith Common c.SAC Habitats Directive Site Characterisation.</p> <p>Penny Anderson Associates Limited (2008) Skipwith Common:</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>habitat on a particular SAC.</p> <p>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.</p> <p>All the heathland communities are relatively species poor. This was noted in the 1977 Nature Conservation Review which stated that the wet heath was “rather species poor floristically” and “lacked some of the bryophytes of southern heaths”. The 1993 NVC survey confirmed this, as have subsequent surveys.</p> <p>Species of particular note include a small, but long established population of Marsh Gentian (<i>Gentiana pneumonanthe</i>) in the south west corner of Bomb Bays SE653372</p> <p>Although not strictly a wet heath species being more closely associated with ephemeral ponds within the heathland vegetation, Pillwort (<i>Pilularia globulifera</i>) is a key species on the site. Main location SE647374</p> <p>It has been suggested (Small 2009) that <i>Sphagnum compactum</i> should be present to frequent amongst wet heath communities. <i>S. compactum</i> is typically strongly associated with the NVC community M16 (Rodwell 1991) and is present locally on the Common. A review by Small suggested it had once been more widespread. It would therefore seem to be an appropriate typical species associated with wet heath.</p>	<p>Impact Of Local Ammonia Emissions. Report to Natural England.</p> <p>Natural England (2013) Integrated Site Assessment (ISA) Natural England (S. Christian) [Available from Natural England on request].</p>
<b>Structure and function (including its typical species)</b>	<b>Vegetation: undesirable species</b>	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	This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		their spread;	<p>cases these species may be natural/acceptable components or even dominants.</p> <p>At present scrub encroachment particularly Birch <i>Betula pendula</i> is the main woody species requiring control to keep site in favourable condition.</p> <p>Himalayan Balsam <i>Impatiens glandulifera</i> is present in some areas and is a non woody species of concern and management is undertaken to ensure that this invasive does not spread.</p> <p>Undesirable species include: <i>Rhododendron ponticum</i>, <i>Fallopia japonica</i>, <i>Apium nodiflorum</i>, <i>Cirsium arvense</i>, <i>Digitalis purpurea</i>, <i>Epilobium</i> spp. (excl. <i>E. palustre</i>), , <i>Juncus effusus</i>, <i>Phragmites</i> spp., <i>Ranunculus repens</i>, <i>Senecio jacobaea</i>, <i>Rumex obtusifolius</i>, <i>Typha</i> spp., <i>Urtica</i> spp. <i>Alnus glutinosa</i>, <i>Betula</i> spp., <i>Prunus spinosa</i>, <i>Pinus</i> spp., <i>Rubus</i> spp., <i>Quercus</i> spp. <i>Acrocarpous</i> mosses &lt;occasional.</p>	
<b>Structure and function (including its typical species)</b>	<b>Functional connectivity with wider landscape</b>	Maintain the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site	<p>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 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.</p> <p>Skipwith Common SAC forms part of the larger "Skipwith Common", the total area of the Common occupying 331.73 ha (Aitchison and Ashby 2000). This area excludes the area of Skipwith Common in Riccall Parish which occupies an</p>	Aitchison, J & Ashby, M. (2000) The Common Lands of Yorkshire – A Biological survey, Volume 1. Department of the Environment, Transport and the Regions _ Rural Surveys Research unit.



Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			additional 20ha. The 2000 survey identified a number of habitats on the wider Common including extensive stands of a birch woodland that has developed on area of previously open heathland. The wider Common (often referred to as "Back Common") to the north of the SAC. On other areas the SAC is bounded by mixed farming, much of which is managed under agri-environment schemes.	
<b>Structure and function (including its typical species)</b>	<b>Adaptation and resilience</b>	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	<p>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.</p> <p>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.</p> <p>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. This means that this site is considered to be the most vulnerable sites overall and are likely to require the most adaptation action, most urgently. A site based assessment should be carried out as a priority.</p> <p>This means that action to address specific issues is likely, such as reducing habitat fragmentation, creating more habitat to buffer the site or expand the habitat into more varied landscapes and addressing particular management and condition issues. Individual species may be more or less vulnerable than their habitat itself. In many cases, change will</p>	Natural England, 2015. <a href="#">Climate Change Theme Plan and supporting NBCCV Assessments for SACs and SPAs</a>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			be inevitable so appropriate monitoring would be advisable.	
<b>Supporting processes (on which the feature relies)</b>	<b>Conservation measures</b>	Maintain the management measures (either within and/or outside the site boundary as appropriate) which are necessary to maintain structure, functions and supporting processes associated with the feature	<p>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.</p> <p>Grazing management is currently undertaken by the owner under an agri-environment scheme, the site being grazed by a combination of long-horn cattle, Hebridean sheep and Exmoor Ponies at a level sympathetic to maintain favourable condition. Any activity threatening the viability of this management could pose a risk to heathland habitat. Uncontrolled dogs can pose a risk to livestock and are an ongoing concern.</p> <p>Scrub management is undertaken by both the owner as part of agri-environment scheme and by Natural England National Nature Reserve site staff and volunteers. Scrub management is likely to be an ongoing requirement in addition to grazing management.</p> <p>Both these issues are highlighted in the Site Improvement Plan for Skipwith Common (2014)</p>	Natural England (2014) <a href="#">Site Improvement Plan Skipwith Common.</a>
<b>Supporting processes (on which the feature relies)</b>	<b>Soils, substrate and nutrient cycling</b>	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 habitat.	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 to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			This Annex 1 habitat has essentially raw soils with little humus and low nutrient status.	
<b>Supporting processes (on which the feature relies)</b>	<b>Air quality</b>	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 ( <a href="http://www.apis.ac.uk">www.apis.ac.uk</a> ).	<p>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.</p> <p>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<sub>3</sub>), oxides of nitrogen (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>), 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.</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. 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.</p> <p>An initial assessment of air quality impacts in relation to ammonia has been undertaken by Penny Anderson Associates (2008). This concluded “<i>Vegetation described for all three heathland areas was consistent with NVC designations for M16/H9 wet/dry lowland heath, with Sphagnum and macrolichen species frequent throughout, and met the conservation objectives with respect to the lower plants and the presence/absence of negative and positive species, although only two forb species (Galium saxatile and Potentilla erecta)</i>”</p>	<p>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 (<a href="http://www.apis.ac.uk">www.apis.ac.uk</a>).</p> <p>Penny Anderson Associates Limited (2008) Skipwith Common: Impact Of Local Ammonia Emissions. Report to Natural England</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<i>were recorded".</i>	
<b>Supporting processes (on which the feature relies)</b>	<b>Water quality</b>	Where the feature is dependent on surface water and/or groundwater maintain water quality and quantity to a standard which provides the necessary conditions to support the feature	<p>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.</p> <p>Changes in hydrology have occurred as a result of mining subsidence in the past. Although mitigation has been implemented to rectify hydrological changes, periodic monitoring may be required in order to ensure mitigation continues to deliver desired results.</p> <p>Any plans relating to drainage of the site through existing or new drains will require detailed assessment to ensure that adverse impacts do not occur.</p>	
<b>Supporting processes (on which the feature relies)</b>	<b>Hydrology</b>	At a site, unit and/or catchment level (as necessary, maintain the natural hydrological regime 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. Changes in hydrology have occurred as a result of mining subsidence in the past. Although mitigation has been implemented to rectify hydrological changes, periodic monitoring may be required in order to ensure mitigation continues to deliver desired results. Any plans relating to drainage of the site through existing or new drains will require detailed assessment to ensure that adverse impacts do not	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			occur.	
<b>Version Control</b> Advice last updated <b>14 March 19</b> : Following stakeholder feedback, additional text added <b>Vegetation structure: tree cover</b> attribute to clarify woodland extent across the site.				
<b>Variations from national feature-framework of integrity-guidance:</b> N/A				

**Table 2: Supplementary Advice for Qualifying Features: H4030. European dry heaths**

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<b>Extent and distribution of the feature</b>	<b>Extent of the feature within the site</b>	Maintain the total extent of the H4030 feature at approximately 18ha	<p>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. Area measurements given may be approximate depending on the methods, age and accuracy of data collection, and as a result this value may be updated in future to reflect more accurate information.</p> <p>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.</p> <p>Various surveys have been undertaken since the notification of the associated Site of Special Scientific Interest and these have shown some variation in the extent of wet and dry heath. Early surveys suggested that the extent of dry heath was as little as 10ha in 1991 (English Nature, quoted in Bullen Consultants 2003) whilst an estimate from 2007 (small 2007) suggested c.43 ha. The 1993 NVC survey did not quantify extent of heathland communities, but did record extensive areas of NVC community H9c <i>Calluna vulgaris</i> (heather) -<i>Deschampsia flexuosa</i> (wavy hair grass). The Habitats Directive Site Characterisation prepared by Bullen Consultants for the Environment Agency in 2003 estimated that dry heath covered c.10% of the site (c.29ha) and the Natura 2000 standard data form suggests a similar figure of 29.46ha. The 2013 ISA survey suggested 18ha.</p>	<p>Bullens Consultants (2003) Skipwith Common c.SAC Habitats Directive Site Characterisation</p> <p>English Nature (1991) Phase 1 Habitat Survey. Natural England Archive files.</p> <p>Humphries Rowell Associates (2002) Stanley main Seam &amp; Skipwith Common Baseline Report.</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available form Natural England on request]</p> <p>Small, J. (2007) Major Vegetation Communities, Natural England archive files available on request.</p> <p>Weston A. &amp; Littler J. (1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p>



Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Within the site wet and dry heathland communities form an intimate mosaic and this also accounts for some of the difference in extent estimates it being very difficult to differentiate between the two habitats and accurately map them and this is likely to account for the difference in extent between the various surveys.</p> <p>The lower figure reported by the 2013 ISA can be explained by the open heathland being preferentially classified as wet heath community when compared with earlier assessments. The area in 2007 is also considered an over estimate since this assumed all areas cleared of trees and scrub under the Tomorrows Heathland Heritage HLF Project would develop heathland communities. The 2013 Integrated Sites Assessment clearly indicated this had not been the case with many areas developing into a rush dominated mire vegetation. The 2013 ISA also demonstrated that the areas of both wet and dry heathland was greater than those at the time of SSSI notification.</p> <p>The 2013 ISA extent figures be taken as a baseline, and these figures have been adopted for this supplementary advice. These figures also concur with the previous estimate of extent made by Humphries Rowell in 2002.</p>	
<b>Extent and distribution of the feature</b>	<b>Spatial distribution of the feature within the site</b>	Maintain distribution and configuration of the feature, including where applicable its component vegetation types, across the site	<p>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 move around the site to occupy and use habitat. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat.</p> <p>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,</p>	<p>Humphries Rowell Associates (2002) Stanley main Seam &amp; Skipwith Common Baseline Report.</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available form Natural England on request]</p> <p>Weston A. &amp; Littler J. (1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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.</p> <p>Distribution of the dry heath communities corresponds to the distribution of the H9 <i>Calluna vulgaris</i> (heather) -<i>Deschampsia flexuosa</i> (wavy hair grass) NVC community.</p> <p>As previously stated the wet and dry heathland communities form an intricate mosaic each blending into the other. Distribution maps of the two communities are provided in the Weston and Littler (1993), Humphries Rowell Associates (2002) and the 2013 Integrated Sites Assessment. The latter survey tended to preferentially classify heath the wet heath community when compared with the 2002 assessment however the distribution of the main community types do correspond with previous surveys and are taken as baseline.</p>	
<b>Structure and function (including its typical species)</b>	<b>Vegetation community composition</b>	<p>Ensure the component vegetation communities of the feature are referable to and characterised by the following National Vegetation Classification type:</p> <ul style="list-style-type: none"> <li>H9c <i>Calluna vulgaris</i> (heather) -<i>Deschampsia flexuosa</i> (wavy hair grass) Species poor sub community</li> </ul>	<p>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).</p> <p>All the heathland communities are relatively species poor. This was noted in the 1977 Nature Conservation Review which stated that the heathland was “rather species poor floristically” and “lacked some of the bryophytes of southern heaths”. The 1993 NVC survey (Weston and Littler) confirmed this, as did the site Characterisation report (Bullen Consultants 2002) and the 2013 ISA. It has been suggested (YWT 1998, referenced in</p>	<p>Bullens Consultants (2003) Skipwith Common c.SAC Habitats Directive Site Characterisation</p> <p>Fitzgerald. C. (1998) Draft Management Plan. Yorkshire Wildlife Trust</p> <p>Humphries Rowell Associates (2002) Stanley main Seam &amp; Skipwith Common Baseline Report.</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available from Natural England on request]</p> <p>Ratcliffe D.A. (1997) A Nature Conservation Review Vol 2.</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Bullen consultants 2002) suggests that this could be related to high levels of atmospheric pollution in the Vale of York, atmospheric pollution being a controlling factor for the distribution of dry heathland (Rodwell 1991) communities	Weston A. & Littler J. (1993) NVC of Skipwith Common SSSI and Strensall Common SSSI
<b>Structure and function (including its typical species)</b>	<b>Vegetation community transitions</b>	Maintain any areas of transition between this and communities which form other heathland-associated habitats, such as dry and humid heaths, mires, acid grasslands, scrub and woodland.	<p>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. This is an important attribute as many characteristic heathland species utilise the transitions between vegetation types or use different vegetation types during different stages of their life cycle.</p> <p>As previous stated the wet and dry heathland communities form an intricate mosaic each blending into the other. Distribution maps of the two communities are provided in the Weston and Littler (1993), Humphries Rowell Associates (2002) and the 2013 Integrated Sites Assessment.</p>	<p>Humphries Rowell Associates (2002) Stanley main Seam &amp; Skipwith Common Baseline Report.</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available form Natural England on request]</p> <p>Weston A. &amp; Littler J. (1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p> <p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>
<b>Structure and function (including its typical species)</b>	<b>Vegetation structure: cover of dwarf shrubs</b>	Maintain overall cover of dwarf shrub species which is typically between 25-90%	<p>Variations in the structure of the heathland vegetation (vegetation height, amount of canopy closure, and patch structure) is needed to maintain high niche diversity and hence high species richness of characteristic heathland plants and animals. Many species also utilise the transitions between vegetation types or use different vegetation types during different stages of their life cycle.</p> <p>The structural character of the heathland feature is strongly influenced by the growing habits of its dominant species which in most cases will be ericoids (i.e. plants that look like heathers, including members of the <i>Ericaceae</i> and <i>Empetraceae</i> families). The ericaceous species heather or ling <i>Calluna vulgaris</i>, bell heather <i>Erica cinerea</i>, cross-leaved heath <i>Erica tetralix</i> are the commonest and most characteristic dwarf-shrubs found at Skipwith Common.</p>	This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<b>Structure and function (including its typical species)</b>	<b>Vegetation composition: bracken cover</b>	Maintain a cover of dense bracken which is low, typically at <5%	<p>The spread of bracken <i>Pteridium aquilinum</i> is a problem on many lowland heathlands. The unpalatable nature and density of bracken as a tall-herb fern, and its decomposing litter, can smother and shade out smaller and more characteristic heathland vegetation. Usually active management of bracken is required to reduce or contain its cover across this habitat feature. But this fern has also some nature conservation value, for example on sites where fritillary butterflies occur and utilise bracken litter habitat.</p> <p>Bracken stands have been mapped in 1991 (English Nature, quoted in Bullen Consultants 2003), Weston and Littler (1993) and the 2013 Integrated Sites Assessment. Stands tend to be restricted to the drier fringes of the Common and for the most part are long established. Small's 2007 estimate estimated extent as 8.8ha and this corresponds with figures from 1985 and 1991 quoted in the SAC site Characterisation report (Bullen Consultants 2003). The 2018 ISA reported a slightly higher area of c.16ha and is thought to be most accurate being determined through site survey and aerial photograph interpretation. This is therefore taken as baseline.</p>	<p>Bullen Consultants (2003) Skipwith Common c.SAC Habitats Directive Site Characterisation</p> <p>English Nature (1991) Phase 1 Habitat Survey. (Available on request from Natural England)</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available form Natural England on request]</p> <p>Small, J (2007) Major Vegetation Communities, Natural England archive files available on request.</p> <p>Weston A. &amp; Littler J.(1993) NVC of Skipwith Common SSSI and Strensall Common SSSI</p> <p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>
<b>Structure and function (including its typical species)</b>	<b>Vegetation structure: cover of gorse</b>	Maintain cover of common gorse <i>Ulex europaeus</i> at <25%	<p>Gorse as a component of heathland is a very valuable wildlife habitat, and often a marker of relict heath and common. Both dense and spiny, it provides good, protected cover for many wildlife species: birds, mammals and reptiles; breeding habitat for rare or declining bird species, and excellent winter roosting.</p> <p>The flowers, borne at a time of year when other sources of pollen or nectar are in short supply, are particularly good for insects and other invertebrate pollinators. However gorse may cause problems if unchecked by dominating an area, eliminating other typical heathland species. Mature stands en masse may also be serious fire hazards.</p>	<p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Gorse is relatively scarce on Skipwith Common and western gorse <i>Ulex gallii</i> absent from the Common.	
<b>Structure and function (including its typical species)</b>	<b>Vegetation structure: tree cover</b>	Maintain the open character of the feature, with a typically scattered and low cover of trees and scrub (<20% cover)	<p>Scrub (mainly trees or tree saplings above 1 m in height) and isolated trees are usually very important in providing warmth, shelter, cover, food plants, perches, territorial markers and sources of prey for typical heathland invertebrates and vertebrates. But overall cover of scrub and trees across this habitat feature should be maintained or restored to a fairly sparse level, with a structurally complex edge and with characteristic heathland vegetation as ground cover. If scrub is locally important for any associated species with their own specific conservation objectives, then a higher level of cover will be acceptable. The area of scrub/tree cover should be stable or not increasing as a whole.</p> <p>Although scrub and woodland are important features of the Common these should not expand at the expense of open heathland, mire and grassland communities.</p> <p>An assessment of woodland cover was made by aerial photograph interpretation in 2007 (Small) following the last phase of extensive woodland /scrub clearance undertaken under the auspices of the Tomorrow's Heathland Heritage Project. This estimated c.116ha of woodland. By extrapolation the 2013 ISA survey suggests just over 100ha of woodland cover.</p> <p>A woodland management plan produced in 2017 (Willison A.) estimated 138 ha of woodland cover however this included 35.6ha areas of "birch wood pasture" which is likely to have been classified as heathland in previous assessments. If this area is excluded woodland cover would be 102.4ha.</p> <p>Given past assessments and for the purposes of this advice woodland cover should not exceed the 116ha reported in 2007. (This excludes areas of birch wood pasture included in the overall woodland cover estimate included within the woodland management plan).</p>	<p>Small, J. (2007) Major Vegetation Communities, Natural England archive files available on request.</p> <p>Natural England (2013) Integrated Site Assessment (ISA) (S. Christian) [Available from Natural England on request]</p> <p>This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a></p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			The open character dry heath areas should be retained, with a typically scattered and low cover of trees and scrub (<20% cover) as specified by the target.	
<b>Structure and function (including its typical species)</b>	<b>Vegetation structure: heather age structure</b>	Restore a diverse age structure amongst the ericaceous shrubs typically found on the site	<p>Each phase of growth associated with the characteristic heathers which dominate this feature also represents different microclimatic conditions and microhabitats which may provide shelter or food to other organisms. Therefore, it is important to maintain a mosaic of heather in different phases of growth. Typically this age structure will consist of between 10-40% cover of (pseudo) pioneer heathers; 20-80% cover of building/mature heathers; &lt;30% cover of degenerate heathers and less than &lt;10% cover of dead heathers</p> <p>The 2013 Integrated Site Assessment (ISA) undertaken by Natural England identified that some units had low densities of mature heather and therefore were not meeting age structure requirements for favourable condition</p>	
<b>Structure and function (including its typical species)</b>	<b>Vegetation: undesirable species</b>	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 their spread.	<p>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 cases these species may be natural/acceptable components or even dominants.</p> <p>At present scrub encroachment particularly Birch <i>Betula pendula</i> is the main woody species requiring control to keep site in favourable condition.</p> <p>Himalayan Balsam <i>Impatiens glandulifera</i> is present in some areas and is a non woody species of concern and management is undertaken to ensure that this invasive does not spread.</p> <p>Negative indicator species present or potentially present on site; <i>Rhododendron ponticum</i>, <i>Cirsium arvense</i>, <i>Digitalis purpurea</i>, <i>Epilobium</i> spp. (excl. <i>E. palustre</i>), <i>Chamerion</i></p>	This attribute will be periodically monitored as part of Natural England's <a href="#">SSSI Condition Assessments</a>



Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<i>angustifolium</i> , <i>Impatiens glandulifera</i> , <i>Juncus effusus</i> , <i>J. squarrosus</i> , <i>Ranunculus repens</i> , <i>Senecio jacobaea</i> , <i>Rumex obtusifolius</i> , <i>Urtica</i> spp., <i>Betula</i> spp., <i>Pinus</i> spp., <i>Rubus</i> spp., <i>Acrocarpus</i> mosses All species should be <occasional.	
<b>Structure and function (including its typical species)</b>	<b>Typical species: flora and fauna</b>	<p>Maintain the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature</p> <ul style="list-style-type: none"> <li>Constant and preferential plant species of H9c <i>Calluna vulgaris</i> (heather) - <i>Deschampsia flexuosa</i> (wavy hair grass) species poor NVC sub-community at this site.</li> </ul>	<p>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;</p> <ul style="list-style-type: none"> <li><b>Influential</b> 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)</li> <li><b>Site-distinctive</b> species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC.</li> </ul> <p>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.</p> <p>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.</p> <p>Dry heath communities are relatively species poor. This was noted in the 1977 Nature Conservation Review which stated that the heathland was “rather species poor floristically” and “lacked some of the bryophytes of southern heaths”. The 1993 NVC survey confirmed this, as did the site Characterisation report (Bullen Consultants 2002) and the 2013 ISA</p>	
<b>Structure and function</b>	<b>Functional connectivity</b>	Maintain the overall extent, quality and function of any	This recognises the potential need at this site to maintain or restore the connectivity of the site to its wider landscape in	Aitchison, J. & Ashby M. (2000) Department of the Environment,

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
(including its typical species)	with wider landscape	supporting features within the local landscape which provide a critical functional connection with the site	<p>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.</p> <p>These features may also be important to the operation of the supporting ecological processes on which 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.</p> <p>Skipwith Common forms part of a larger "Common", the total area of the Common occupying 331.73 ha (Aitchison and Ashby 2000). This area excludes the area of Skipwith Common in Riccall Parish which occupies an additional 20ha. The 2000 survey identified a number of habitats on the wider Common including extensive stands of a birch woodland that has developed on area of previously open heathland. The wider Common (often referred to as "Back Common") lies to the north of the SAC. On other areas the SAC is bounded by mixed farming, much of which is managed under agri-environment schemes.</p>	Transport and the Regions _ Rural Surveys Research unit (The Common Lands of Yorkshire – A Biological survey, Volume 1.
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.	Natural England, 2015. <a href="#">Climate Change Theme Plan and supporting NBCCV Assessments for SACs and SPAs</a>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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.</p> <p>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. This means that this site is considered to be the most vulnerable sites overall and are likely to require the most adaptation action, most urgently. A site based assessment should be carried out as a priority.</p> <p>This means that action to address specific issues is likely, such as reducing habitat fragmentation, creating more habitat to buffer the site or expand the habitat into more varied landscapes and addressing particular management and condition issues. Individual species may be more or less vulnerable than their habitat itself. In many cases, change will be inevitable so appropriate monitoring would be advisable.</p>	
<b>Structure and function (including its typical species)</b>	<b>Soils, substrate and nutrient cycling</b>	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 habitat.	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 to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.	
<b>Supporting processes (on which the feature relies)</b>	<b>Conservation measures</b>	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	<p>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.</p> <p>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</p>	Natural England (2014) <a href="#">Site Improvement Plan</a> <a href="#">Skipwith Common</a> .

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Management Statement for the underpinning SSSI and/or management agreements.</p> <p>Management that may be appropriate for this feature includes:</p> <ul style="list-style-type: none"> <li>• Maintain low nutrient levels to maintain high numbers of species through the management activities of grazing, mowing, and scrub/tree cutting. Management of succession is a critical aspect of management for this habitat, by a combination of active processes and grazing/cutting.</li> <li>• A range of invertebrates and plants require bare ground/peat where it is not too frequently disturbed by vehicles or feet.</li> </ul> <p>Grazing management is currently undertaken by owner under an agri-environment scheme, the site being grazed by a combination of long-horn cattle, Hebridean sheep and Exmoor ponies at a level sympathetic to maintain favourable condition. Any activity threatened the viability of this management could pose a risk to heathland habitat. Uncontrolled dogs can pose a risk to livestock and are an ongoing concern.</p> <p>Scrub management is undertaken by both the owner as part of agri-environment scheme and by Natural England National Nature Reserve site staff and volunteers. Scrub management is likely to be an ongoing requirement in addition to grazing management. This is highlighted in the Site Improvement Plan for Skipwith Common (2014)</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
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 ( <a href="http://www.apis.ac.uk">www.apis.ac.uk</a> ).	<p>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.</p> <p>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<sub>3</sub>), oxides of nitrogen (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>), 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.</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. 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.</p> <p>An initial assessment of air quality impacts in relation to ammonia has been undertaken by Penny Anderson Associates (2008). This concluded "<i>Vegetation described for all three heathland areas was consistent with NVC designations for M16/H9 wet/dry lowland heath, with Sphagnum and macrolichen species frequent throughout, and met the conservation objectives with respect to the lower plants and the presence/ absence of negative and positive species, although only two forb species (Galium saxatile and Potentilla erecta) were recorded</i>".</p>	<p>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 (<a href="http://www.apis.ac.uk">www.apis.ac.uk</a>).</p> <p>Penny Anderson Associates Limited (2008) Skipwith Common: Impact Of Local Ammonia Emissions. Report to Natural England</p>
Supporting processes	Water quality	Where the feature is dependent on surface water and/or	For many SAC features which are dependent on wetland habitats supported by surface and/or ground water, maintaining	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
(on which the feature relies)		groundwater, maintain water quality and quantity to a standard which provides the necessary conditions to support the feature.	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.	
Supporting processes (on which the feature relies)	Hydrology	At a site, unit and/or catchment level (as necessary, Maintain natural hydrological processes to provide the conditions necessary to sustain the feature within the site	<p>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.</p> <p>Changes in hydrology have occurred as a result of mining subsidence in the past. Although mitigation has been implemented to rectify hydrological changes, periodic monitoring may be required in order to ensure mitigation continues to deliver desired results.</p> <p>Any plans relating to drainage of the site through existing or new drains will require detailed assessment to ensure that adverse impacts do not occur.</p>	
<b>Version Control</b> Advice last updated: Advice last updated <b>14 March 19</b> : Following stakeholder feedback, additional text added <b>Vegetation structure: tree cover</b> attribute to clarify woodland extent across the site.				
<b>Variations from national feature-framework of integrity-guidance:</b> N/A				



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