



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

**Downton Gorge Special Area of Conservation (SAC)  
Site code: UK0012735**



Downton Gorge NNR ©Simon Cooter/Natural England

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## **About this document**

This document provides Natural England's supplementary advice about the European Site Conservation Objectives relating to Downton Gorge SAC. This advice should therefore be read together with the SAC Conservation Objectives which are 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 describes in more detail the range of ecological attributes on which the qualifying features will depend and which are most likely to contribute to a site's overall integrity. It sets out minimum targets for each qualifying feature to achieve in order to meet the site's objectives.

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

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

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

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

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

**If you have any comments or queries about this Supplementary Advice document please contact your local Natural England adviser or email [HDIRConservationObjectivesNE@naturalengland.org.uk](mailto:HDIRConservationObjectivesNE@naturalengland.org.uk)**

## About this site

### European Site information

<b>Name of European Site</b>	Downton Gorge Special Area of Conservation (SAC)
<b>Location</b>	Herefordshire ( <i>Centre of site</i> Latitude 02 49 07 W and Longitude 52 21 48 N)
<b>Site maps</b>	The designated boundary of this site can be viewed <a href="#">here</a> on the MAGIC website
<b>Designation Date</b>	1 April 2005
<b>Qualifying Features</b>	H9180 <i>Tilio-Acerion</i> forests of slopes, screes and ravines.
<b>Designation Area</b>	68.88 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>	Downton Gorge SSSI; the SAC boundary abuts the River Teme SSSI
<b>Relationship with other European or International Site designations</b>	None
<b>Other information</b>	<a href="#">Natura 2000 Standard Data Form</a> for Downton Gorge SAC

### Site background and geography

Downton Gorge lies on a stretch of the River Teme within the old county of Herefordshire where its northern boundary borders Shropshire. The gorge itself was formed by the river cutting through a ridge of limestones, siltstones and sandstones of late Silurian age. Downton Gorge includes a number of important geological sites, some of which have yielded fossil remains of rare primitive fish.

In the southern part of the site this has resulted in a deep ravine with steep cliffs. In the northern part of the site the river valley is joined by a series of small side valleys ('dingles') whose streams drain into the main river. Small flat areas of alluvium occur adjacent to the river where the gorge is at its broadest.

The site has been selected as an example of ancient semi-natural woodland displaying a number of types of woodland, some of which are nationally scarce.

The woodlands of the gorge once formed part of the ancient Royal Chase of Bringewood which covered a large area in this part of the Welsh Borders during mediaeval times. Apart from the Downton Gorge woodlands only a few relict fragments of this ancient Chase survive having been destroyed largely by clearance for agriculture in the intervening centuries and latterly by coniferisation since the First World War. Historical records demonstrate a continuity of structure and species composition in the woods of the site.

The SAC includes the Downton Gorge [National Nature Reserve](#) managed by 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:

- **H9180 *Tilio-Acerion* forests of slopes, screes and ravines \*(priority feature) ('Mixed woodland on base-rich soils associated with rocky slopes')**.

In the UK, *Tilio-Acerion* ravine forests are woods dominated by ash *Fraxinus excelsior*, wych elm *Ulmus glabra* and lime (mainly small-leaved lime *Tilia cordata* but more rarely large-leaved lime *T. platyphyllos*). Introduced sycamore *Acer pseudoplatanus* is often present and is a common part of the community in mainland Europe, where it is native.

This habitat type typically occurs on nutrient-rich soils that often accumulate in the shady micro-climates towards the bases of slopes and ravines. Therefore it is found on calcareous substrates associated with coarse scree, cliffs, steep rocky slopes and ravines, where inaccessibility has reduced human impact. It often occurs as a series of scattered patches grading into other types of woodland on level valley floors and on slopes above, or as narrow strips along stream-sides. More extensive stands occur on limestone and other base-rich rocks.

Downton Gorge SAC supports an example of *Tilio-Acerion* forest in a narrow ravine with a distinctive microclimate and a variety of slopes and aspects. The SAC is particularly rich in both small-leaved lime *Tilia cordata* and large-leaved lime *T. platyphyllos*, which are present together with ash *Fraxinus excelsior* and elm *Ulmus spp.* The woodland ground flora includes wood fescue *Festuca altissima* and violet helleborine *Epipactis purpurata*. The gorge cliffs are rich in ferns, reflecting the humidity of the site, with a wide range of species recorded including the uncommon oak fern *Gymnocarpium dryopteris* and brittle bladder-fern *Cystopteris fragilis*.

The woodland is also important for mosses and lichens. Over 100 species of lichen have been recorded from Downton Gorge which is considered to be a site of national importance for this group of plants. A number of these are typically associated with ancient woodland, and one of these, tree lungwort *Lobaria pulmonaria* is only found at one other site in central England. Similarly, over 90 species of mosses have been recorded including a number of local and rare species.

In terms of the National Vegetation Classification (NVC) (Rodwell, 1991), the main woodland communities comprising the H9180 feature at this SAC are W8 ash *Fraxinus excelsior* – field maple *Acer campestre* – dog's mercury *Mercurialis perennis* woodland on the lower slopes, and W10 penduculate oak *Quercus robur* – bracken *Pteridium aquilinum* – bramble *Rubus fruticosus* woodland on the upper plateau. There are also variations and transitions present between the two.

### References

RODWELL, J.S. (ed.) 1991. *British Plant Communities. Volume 1 - Woodlands and Scrub*. Cambridge University Press.

**Table 1: Supplementary Advice for Qualifying Features: H9180 *Tilio-Acerion* forests of slopes, screes and ravines**

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<b>Extent and distribution of the feature</b>	Extent of the feature within the site	Maintain the total extent of the H9180 feature at 69.3 ha	<p>There should be no measurable net 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.</p> <p>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. At this SAC, this includes transitions with alder woodland alongside river and with species-rich rock face vegetation.</p> <p>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>For this feature tree roots (particularly of veteran trees) can extend a considerable distance beyond the boundary of the site - they can be impacted by soil compaction (such as caused by vehicles or construction works); agricultural operations or other soil disturbance (like trenches); and agro chemicals or other chemicals which get into the soil. Any loss of woodland area - whether at the edge or in the middle of a site will reduce the core woodland area where woodland conditions are found - these support significant assemblages of species dependent on woodland conditions (e.g. lichens and bryophytes - being one example). Loss of any woodland area which fragments a site into different parts will clearly disturb the movement of species between the remaining part of the woodland.</p> <p>Approximately 85% of the site supports the SAC feature in broad -leaved</p>	<p>Aerial photography held by Natural England</p> <p>WHILD ASSOCIATES, 1999. NVC Survey of Downton Gorge SAC. Report to English Nature. Available from Natural England.</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			deciduous woodland. The remainder of the site comprises approximately 14% inland water bodies (standing water, running water) and 1% coniferous woodland (1%)	
<b>Extent and distribution of the feature</b>	Distribution of the feature within the site	Maintain the distribution and configuration of the H9180 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.</p> <p>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.</p> <p>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.</p>	As above
<b>Structure and function (including its typical species)</b>	Vegetation community composition	<p>Ensure the component vegetation communities of the H9180 feature are referable to and characterised by the following National Vegetation Classification type (s):</p> <ul style="list-style-type: none"> <li>• W8 <i>Fraxinus excelsior</i> – <i>Acer campestre</i> – <i>Mercurialis perennis</i> woodland</li> <li>• W10 <i>Quercus robur</i> – <i>Pteridium aquilinum</i> – <i>Rubus fruticosus</i> woodland.</li> <li>• Mosaic of W8/W10 types</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).</p> <p>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.</p>	WHILD ASSOCIATES, 1999
	Vegetation structure - canopy cover	Restore an appropriate tree canopy cover across the H9180 feature, which will typically be between 30-	Canopy cover is the overall proportion of vegetative cover consisting of any woody layer ranging from established regeneration to mature and veteran stages.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		90% of the site	<p>Woodland canopy density and structure is important because it affects ecosystem function and in particular microclimate, litterfall, soil moisture, nutrient turnover and shading; this in turn influences the composition of plants and animals in lower vegetation layers and soil.</p> <p>Open canopies with just scattered trees will have less of a woodland character and reduced diversity of woodland-dependent species (although they may be still be important as a form of woodland-pasture). Completely closed canopies across the whole woodland are not ideal either however, as they cast heavier shade and support fewer species associated with edges, glades and open grown trees, and have little space where tree regeneration could occur.</p> <p>In general, the woodland canopy of this feature should provide a core of woodland interior conditions with some open and edge habitat as well.</p>	
<b>Structure and function (including its typical species)</b>	Vegetation structure - open space	Maintain areas of permanent/temporary open space within the H9180 feature, typically to cover approximately 10%of area	<p>Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>Having some open, sunlit and largely tree-less areas as part of the woodland community is often important to facilitate natural tree and shrub regeneration and also to provide supporting habitat for specialist woodland invertebrates, birds, vascular and lower plants.</p> <p>Open space can be permanent or temporary and may consist of managed grazed areas, linear rides and glades, or naturally-produced gaps caused by disturbance events such as wind-throw/fire/tree falling over/snow damage.</p>	
	Vegetation structure - old growth	<p>Maintain areas of relatively undisturbed mature/old growth stands or a scatter of large trees allowed to grow to over-maturity/death on site (e.g. a minimum of 10% of the woodland).</p> <p>A minimum of 3 fallen lying trees &gt;20 cm diameter per ha and 4 trees per ha allowed to die standing.</p>	<p>Good woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>For this habitat type, old or over-mature elements of the woodland are particularly characteristic and important features, and their continuity should be a priority.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<b>Structure and function (including its typical species)</b>	Vegetation structure - age class distribution	Restore at least 3 age-classes (pole stage/ medium/ mature) spread across the average life expectancy of the commonest trees.	Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.  A distribution of size and age classes of the major site-native tree and shrub species that indicate the woodland will continue in perpetuity, and will provide a variety of the woodland habitats and niches expected for this type of woodland at the site in question.	
	Vegetation structure - shrub layer	Restore an understorey of shrubs to cover 20% of the stand area.		
	Vegetation structure - woodland edge	Restore a graduated woodland edge into adjacent semi-natural open habitats, other woodland/wood-pasture types or scrub.	Woodland edge is defined as being the transitional zone between the forest feature and adjacent but different habitat types - the best woodland edges will have a varied structure in terms of height and cover.  Many typical forest species make regular use of the edge habitats for feeding due to higher herb layer productivity and larger invertebrate populations.	
	Adaptation and resilience	Maintain the resilience of the H9180 feature by ensuring a diversity of site-native trees (at least 4 site native tree species) e.g. ash/ small-leaved lime/ aspen/ alder/ sycamore/ rowan/ bird cherry/ birch) is present across the site.	This recognises the increasing likelihood of natural habitat features needing 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 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 particular SAC to climate change has been assessed by Natural England as being low, taking into account the sensitivity, fragmentation, topography and management of its habitats/supporting habitats. This means that the site is considered to be vulnerable overall but is a lower priority for further assessment and action. Individual species may be more or less vulnerable than their supporting habitat itself. In many cases, change will be inevitable so appropriate monitoring would be required.	NATURAL ENGLAND, 2015. Climate Change Theme Plan and supporting National Biodiversity Climate Change Vulnerability assessments (NBCCVAs) for SACs and SPAs in England [Available at <a href="http://publications.naturalengland.org.uk/publication/4954594591375360">http://publications.naturalengland.org.uk/publication/4954594591375360</a> ]



Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>At this SAC, over-mature Sycamore is accepted as a valuable contribution to the veteran tree component. Stands of mature Beech were planted but some young growth appears to have colonised naturally from a native population on the Wye. Therefore Beech is considered a natural component.</p> <p>Intervention may be required in the future to prevent dominance, depending how shifts in composition proceed.</p>	
<b>Structure and function (including its typical species)</b>	Browsing and grazing by herbivores	Reduce browsing to a (low) level that allows a well-developed understorey with no obvious browse line, & lush ground vegetation with some grazing-sensitive species evident (e.g. bramble, ivy), and tree seedlings and sapling common in gaps.	<p>Herbivores, especially deer, are an integral part of woodland ecosystems. They are important in influencing woodland regeneration, composition and structure and therefore in shaping woodland wildlife communities.</p> <p>Low levels of grazing and browsing are desirable to promote both a diverse woodland structure and continuous seedling establishment. Short periods with no grazing at all can allow fresh natural regeneration of trees, but a long-term absence of herbivores can result in excessively dense thickets of young trees which shade out ground flora and lower plant species. However, heavy grazing by deer or sheep prevents woodland regeneration, and can cause excessive trampling and/or poaching damage, canopy fragmentation, heavy browsing, bark stripping and a heavily grazed sward.</p> <p>Downton Gorge lies within the wider Mortimer Forest area which is known to support a significant population of free-roaming Fallow Deer. The deer currently exert significant grazing pressure in some parts of Downton Gorge.</p>	Deer impact assessments on NNR records
	Regeneration potential	Maintain the potential for sufficient natural regeneration of desirable trees and shrubs to occur. typically seedlings and saplings of desirable species should be visible in sufficient numbers in gaps, at the wood edge and/or as regrowth as appropriate	<p>The regeneration potential of the woodland feature must be maintained if the wood is to be sustained and survive, both in terms of quantity of regeneration and in terms of appropriate species. This will include regeneration of the trees and shrubs from saplings or suckers, regrowth from coppice stools or pollards, and where appropriate planting.</p> <p>Browsing and grazing levels must ensure there is a continuity of natural regeneration across the feature. The density of regeneration considered sufficient is less in parkland sites than in high forest. Regeneration from pollarding of veteran trees should be included where this is happening.</p> <p>There are woodland clearings at Downton currently kept open by deer, this are</p>	<p>Deer impact assessments on NNR records</p> <p>NATURAL ENGLAND, 2015. Downton Gorge Site Improvement Plan (SIP064) <a href="http://publicatio">http://publicatio</a></p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>accepted as permanent open space. In coppiced areas most of the regeneration will be as stump regrowth which needs protecting from deer browsing.</p> <p>Some tree planting at Downton has taken place to re-establish tree cover on felled conifer plantation as quickly as possible. However woodland regeneration without planting is preferred and could be just as rapid if deer are excluded with fencing.</p> <p>Lime is able to regenerate from seed at Downton Gorge.</p>	<a href="https://www.naturalengland.org.uk/publication/6186372809359360">ns.naturalengland.org.uk/publication/6186372809359360</a>
<b>Structure and function (including its typical species)</b>	Key structural, influential and/or distinctive species	<p>Restore the abundance of the species listed below to enable each of them to be a viable component of the H9180 habitat;</p> <p>Ash <i>Fraxinus excelsior</i>, elms <i>Ulmus spp.</i> Hazel <i>Corylus avellana</i>, oaks <i>Quercus spp.</i>, large-leaved lime <i>Tilia platyphyllos</i>, small-leaved lime <i>T. cordata</i> and wild service <i>Sorbus torminalis</i>.</p> <p>Distinctive species; Wood Fescue, <i>Festuca altissima</i>, Water Betony <i>Scrophularia umbrosa</i>, Lily of the valley, Herb Paris <i>Convallaria majalis</i>, <i>Paris quadrifolia</i>, Rock Stonecrop, <i>Sedum forsterianum</i></p> <p>Lower plant assemblage, including epiphytic lichens</p> <p>Assemblage of ferns including <i>Gymnocarpium dryopteris</i> (Oak Fern) and Brittle Bladder Fern (<i>Cystopteris fragilis</i>).</p> <p>Assemblage of notable saproxylic</p>	<p>Some plant or animal species (or related groups of such species) make a particularly important contribution to the 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>- Structural species which form a key part of the habitat's structure or help to define an Annex I habitat on a site (see also the attribute for 'vegetation community composition').</li> <li>- 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).</li> <li>- Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular site.</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>DAVEY, S. 2005. Downton Gorge National Nature Reserve, A Lower Plant Survey. Report to English Nature.</p> <p>WHILD ASSOCIATES, 1999.</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		(decaying-wood) invertebrates		
<b>Structure and function (including its typical species)</b>	Invasive, non-native and/or introduced species	<p>Ensure invasive and introduced non-native species are either rare or absent, but if present are causing minimal damage to the H9180 feature</p> <p>Ensure sycamore is not preventing regeneration of native trees and shrubs.</p>	<p>Invasive or introduced non-native species are a serious potential threat to the biodiversity of native and ancient woods, because they are able to exclude, damage or suppress the growth of native tree, shrub and ground species (and their associated typical species), reduce structural diversity and prevent the natural regeneration of characteristic site-native species. Once established, the measures to control such species may also impact negatively on the features of interest (e.g. use of broad spectrum pesticides).</p> <p>Such species include Rhododendrons, snowberry, Japanese knotweed, giant hogweed and Himalayan balsam, for example. Other species such as pheasants, rabbits and non-native invertebrate 'pest' species should be managed so that they also have little impact on the feature. Grey squirrels damage Oak and kill Field Maple, but do not appear to be hampering Ash and Hazel regeneration at Downton Gorge. This could lead to a shift in composition, which may have to be accepted for practical reasons.</p> <p>Routinely monitor for the presence of Ash-dieback and other tree diseases and if appropriate develop a mitigation and adaptation plan for the woodland as a management measure.</p>	<p>NATURAL ENGLAND, 2015. Downton Gorge Site Improvement Plan (SIP064) <a href="http://publications.naturalengland.org.uk/publication/6186372809359360">http://publications.naturalengland.org.uk/publication/6186372809359360</a></p>
<b>Supporting processes (on which the feature relies)</b>	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 H9180 habitat.	<p>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.</p> <p>Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.</p>	
	Functional connectivity with wider landscape	Restore 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.</p> <p>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</p>	<p>NATURAL ENGLAND, 2015. Downton Gorge Site Improvement Plan (SIP064) <a href="http://publications.naturalengland.org.uk/publication/6186372809359360">http://publications.naturalengland.org.uk/publication/6186372809359360</a></p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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.</p> <p>In most cases increasing actual and functional landscape-scale connectivity would be beneficial. This SAC is currently a small isolated remnant of the once much larger Bringewood Chase. This isolation increases the vulnerability of the site to the extinction of species through disease or climate change. Connectivity could be improved by linking the SAC to a continuous woodland landscape by, for example, restoration of existing coniferous plantation to broadleaf woodland</p>	<a href="https://www.naturalengland.org.uk/publication/6186372809359360">ns.naturalengland.org.uk/publication/6186372809359360</a>
	Air quality	<p>Restore the concentrations and deposition of air pollutants to within the site-relevant Critical Load or Level values given for the H9180 feature of the site on the Air Pollution Information System (<a href="http://www.apis.ac.uk">www.apis.ac.uk</a>).</p>	<p>This habitat type is considered sensitive to changes in air quality, especially nitrogen and acidity.</p> <p>Exceedance of these critical values for air pollutants may modify the chemical status of the habitat's substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it. The critical values for nitrogen and acidity for this feature at this SAC are currently been exceeded.</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 (NH3), oxides of nitrogen (NOx) and sulphur dioxide (SO2), 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.</p> <p>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>More information about site-relevant Critical Loads and Levels for this SAC is available by using the 'search by site' tool on APIS</p> <p>NATURAL ENGLAND, 2015. Downton Gorge Site Improvement Plan (SIP064) <a href="http://publication.naturalengland.org.uk/publication/6186372809359360">http://publication.naturalengland.org.uk/publication/6186372809359360</a></p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<b>Supporting processes (on which the feature relies)</b>	Hydrology	At a site, unit and/or catchment level (as necessary), maintain natural hydrological processes to provide the conditions necessary to sustain the H9180 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.</p> <p>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.</p> <p>This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts. This is included as disruption/ damage to hydrological processes could be caused by activities at some distance from the site boundary.</p>	
	Illumination	Maintain any artificial light at a level which is unlikely to affect natural phenological cycles and processes to the detriment of the H9810 feature and its typical species at this site.	<p>Woodland biodiversity has naturally evolved with natural patterns of light and darkness, so disturbance or modification of those patterns can influence numerous aspects of plant and animal behaviour.</p> <p>For example, light pollution (from direct glare, chronically increased illumination and/or temporary, unexpected fluctuations in lighting) can affect animal navigation, competitive interactions, predator-prey relations, and animal physiology. Flowering and development of trees and plants can also be modified by un-natural illumination which can disrupt natural seasonal responses.</p>	
	Conservation measures	Implement management measures (either within and/or outside the site's boundary as appropriate) which are necessary to maintain and restore the structure, functions and supporting processes associated with the H9180 feature	<p>Active and ongoing conservation management is needed to protect, maintain or restore this feature at this site.</p> <p>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>NATURAL ENGLAND. Downton Gorge NNR Management Plan.</p> <p>NATURAL ENGLAND, 2015. Downton Gorge Site Improvement Plan (SIP064) <a href="http://publicatio">http://publicatio</a></p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
				<a href="http://ns.naturalengland.org.uk/publication/6186372809359360">ns.naturalengland.org.uk/publication/6186372809359360</a>  ENGLISH NATURE, 2005. <u>Views about the Management of Downton Gorge SSSI.</u>
<b>Version Control</b>				
Advice last updated: 14 October 2016; the explanatory notes for the following attributes have been updated in light of stakeholder comments received on the draft Supplementary Advice dated 26 July 2016 (invasive, introduced and/or non-native species, regeneration potential)				
<b>Variations from national feature-framework of integrity-guidance:</b> N/A				

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