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

Great Yews Special Area of Conservation (SAC)
Site Code: UK0012770

Photo by Steven Davis, English Nature

Date of Publication: 21 January 2019

About this document

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

This advice should therefore be read together with the SAC Conservation Objectives available here.

You should use the Conservation Objectives, this Supplementary Advice and any case-specific advice given by Natural England, when developing, proposing or assessing an activity, plan or project that may affect this site.

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

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

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

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

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

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

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

About this site

European Site information

Name of European Site	Great Yews Special Area of Conservation (SAC)
Location	Wiltshire
Site Map	The designated boundary of this site can be viewed here on the MAGIC website
Designation Date	1 April 2005
Qualifying Features	See section below
Designation Area	28.71 ha
Designation Changes	None
Feature Condition Status	Details of the feature condition assessments made at this site can be found using Natural England's Designated Sites System
Names of component Sites of Special Scientific Interest (SSSIs)	Great Yews SSSI
Relationship with other European or International Site designations	None

Site background and geography

Great Yews SAC is situated on gently sloping ground in an isolated location on the upper chalk south of Salisbury, Wiltshire. It comprises an extensive area of almost pure yew woodland with at least 300 (possibly as many as 500) old trees, including many large and impressive individuals. The site has a long history as yew woodland (it is marked as 'Yew Bushes' on the 1773 Andrews and Drury map of Wiltshire and is thought to have been be associated with the production of yew bows for the Battle of Agincourt in 1415). It demonstrates the full structural and functional range expected of yew stands.

Scattered amongst the yews are isolated mature ash *Fraxinus excelsior* and pedunculate oak *Quercus robur* and there are also patches of ash regeneration. Shrubs are very sparse under the yews, but dense, species-rich scrub occurs on the edges of the wood. Few herbaceous plants exist beneath the yews, but a number occur under the broadleaved trees and alongside the rides. Ferns are well represented.

Two glades, in the north and east of the wood, contain areas of herb-rich rabbit grazed chalk grassland. In the eastern glade the grassland merges into a small area of chalk heath.

Within the SAC boundary there is a dwelling house (The Chalet) with associated garden and curtilage.

A section of the Scheduled Monument 'Grim's Ditch' crosses the northern part of the site.

Great Yews SAC is part of National Character Area (NCA) Profile: 134 Dorset Downs and Cranborne Chase (NE494)

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:

- **H91J0 *Taxus baccata* woods of the British Isles (yew-dominated woodland).**

Yew *Taxus baccata* woodland occurs on shallow, dry soils usually on chalk or limestone slopes, but in a few areas stands on more mesotrophic soils are found. The habitat is classified as NVC type W13 *Taxus baccata* woodland. Within this community yew tends to be overwhelmingly dominant and is usually associated with a very sparse shrub and tree layer. Only a few species, such as dog's mercury *Mercurialis perennis*, can survive beneath the dense shade cast by the canopy of mature yew trees. Association with beech *Fagus sylvatica* and holly *Ilex aquifolium* is less common than in mainland Europe.

Ecological variation arises according to the nature of the yew wood. In the south this type may be either the senescent phase of beech woodland supporting clusters of yew after the fall of beech, or primary woodland developing on unstable slopes. Very locally, box *Buxus sempervirens* may occur below the yew. Eventually individual ash *Fraxinus excelsior* or beech *Fagus sylvatica* may grow through in gaps to recreate an overstorey.

Great Yews SAC includes an extensive area of almost pure yew *Taxus baccata* and contains many large individual trees. The site is important for the presence of at least 300 (possibly up to around 500) old trees. It probably originated as yew wood following beech *Fagus sylvatica* or ash *Fraxinus excelsior*. It has some regeneration and so has the full structural and functional range expected of yew stands.

Qualifying Species:

None

Table 1: Supplementary Advice for Qualifying Features: H91J0. *Taxus baccata* woods of the British Isles; Yew-dominated woodland *

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	**Extent of the feature within the site**	Maintain the total extent of the feature to at least 26.26ha (area of yew woodland excluding the two permanent glades and the house with garden/curtilage). Maintain the extent of the area with mature or senescent yew trees (having a girth of >3m) as at least 50% of the woodland.	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. The extent of an Annex I habitat feature covers the sum extent of all of the component vegetation communities present and may include transitions and mosaics with other closely-associated habitat features. Where a feature is susceptible to natural dynamic processes, there may be acceptable variations in its extent through natural fluctuations. Where a reduction in the extent of a feature is considered necessary to meet the Conservation Objective for another Annex I feature, Natural England will advise on this on a case-by-case basis. For this feature, this attribute includes the extent of the tree'd area and also the number of veteran trees, including dead and living trees. Around 50% of the woodland area is comprised of trees with a girth of over 3m of which the total number is at least 300, but it is thought there are up to 525 trees in this category. Tree roots (particularly of veteran trees) may extend a considerable distance beyond the boundary of the site. Loss of any woodland area which fragments a site into different parts may interrupt the movement of species between the remaining parts of the woodland, especially those with limited powers of dispersal.	NATURAL ENGLAND. Great Yews SAC citation. 2005. Available: http://publications.naturalengland.org.uk/publication/5712522950737920 NORTON, P and MILNER, H.2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate This attribute will be periodically monitored as part of Natural England's SSSI condition assessments
Extent and distribution of the feature	**Spatial distribution of the feature within the site**	Maintain the distribution and configuration of the feature, including where applicable its component vegetation types, across the site	A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to	NORTON, P and MILNER, H.2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			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 Annex I habitat feature.	
Structure and function (including its typical species)	**Vegetation community composition**	Ensure the component vegetation communities of the feature are referable to and characterised by the following National Vegetation Classification type: W13 *Taxus baccata* woodland	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).	ENGLISH NATURE. 2004. Great Yews SSSI Favourable Conservation Table NATURAL ENGLAND. Great Yews SAC citation. 2005. Available: http://publications.naturalengland.org.uk/publication/5712522950737920 NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate This attribute will be periodically monitored as part of Natural England's SSSI condition assessments
Structure and function (including its	**Vegetation structure - canopy cover**	Maintain an appropriate tree canopy cover across the feature, which will typically be between	Canopy cover is the overall proportion of vegetative cover consisting of any woody layer ranging from established regeneration to mature and veteran stages.	NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate. Private

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
typical species)		40-90% of the site.	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. 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. In general, the woodland canopy of this feature should provide a core of woodland interior conditions with some open and edge habitat as well.	report for Longford Estate NORTON, P and MILNER, H.2017. Great Yews: Tree Characteristics and Standing Volume. Private report for Longford Estate
Structure and function (including its typical species)	**Vegetation structure - open space**	Maintain areas of permanent/temporary open space within the woodland feature, to cover approximately 5% of area.	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. The targets set within this attribute should reflect what the most appropriate structure for the woodland feature on a particular site, taking account of its known interest, history, past management and the landscape context. 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. Such 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	NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate NATURAL ENGLAND. 2007. Higher Level Stewardship agreement Woodland Management Plan. Available from Natural England.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			windthrow/fire/tree falling over/snow damage.	
Structure and function (including its typical species)	**Vegetation structure - old growth**	Maintain the extent and continuity of undisturbed, mature/old growth stands (typically comprising at least 50% of the feature at any one time) and the assemblages of veteran and ancient trees (typically >10 trees per hectare).	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. The targets set within this attribute should reflect the most appropriate structure for the woodland feature on a particular site, taking account of its known interest, history, past management and the landscape context. 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. The wood is characterised by a large number of mature and senescent yews.	ENGLISH NATURE. 1986. Great Yews SSSI citation. . NATURAL ENGLAND. Great Yews SAC citation. 2005. Available: http://publications.naturalengland.org.uk/publication/5712522950737920 NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate NORTON, P and MILNER, H. 2017. Great Yews: Tree Characteristics and Standing Volume. Private report for Longford Estate
Structure and function (including its typical species)	**Vegetation structure - dead wood**	Maintain the continuity and abundance of standing or fallen dead and decaying wood.	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. The targets set within this attribute should reflect the most appropriate structure for the woodland feature on a particular site, taking account of its known interest, history, past management and the landscape context. Dead and actively decaying wood, either as part of a standing tree or as a fallen tree on the woodland floor, is an important component of woodland ecosystems, and supports a range of specialist invertebrates, fungi, lichens and bryophytes, and associated hole-nesting birds and roosting bats, all of which may be very typical of the feature. There are a low number of dead yews, estimated at less than 1% of the total. Some of the older trees exhibit reduced foliage,	NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate NORTON, P and MILNER, H. 2017. Great Yews: Tree Characteristics and Standing Volume (private report) This attribute will be periodically monitored as part of Natural England's SSSI condition assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			but the cause is unknown. Ash dieback is likely to result in a localised increase in dead wood over time and may also provide gaps creating more regeneration opportunities for yew.	
Structure and function (including its typical species)	**Vegetation structure - age class distribution**	Maintain at least 2 age classes (e.g. pole stage, mature, veteran) spread across the average life expectancy of the trees - which can be hundreds of years.	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. The wood has a high proportion of mature and senescent yew trees. Yew seedlings are present, but there are few young trees. Ash and oak exhibit a greater diversity of age classes.	NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate NORTON, P and MILNER, H. 2017. Great Yews: Tree Characteristics and Standing Volume. Private report for Longford Estate This attribute will be periodically monitored as part of Natural England's SSSI condition assessments
Structure and function (including its typical species)	**Vegetation structure - shrub layer**	Maintain a structure which is characterised by an absent or sparse understorey under the yew canopy, with shrubs only occasionally present (e.g. hawthorn, hazel, willow, blackthorn) where light levels are higher due to gaps in the canopy.	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. The targets set within this attribute should reflect the most appropriate structure for the woodland feature on a particular site, taking account of its known interest, history, past management and the landscape context.	ENGLISH NATURE. 1986. Great Yews SSSI citation. NORTON, P and MILNER, H, 2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate NORTON, P and MILNER, H. 2017. Great Yews: Tree Characteristics and Standing Volume. Private report for Longford Estate This attribute will be periodically monitored as part of Natural England's SSSI condition assessments
Structure and	**Vegetation**	Maintain a graduated woodland	Woodland structure includes variations in age, tree form,	ENGLISH NATURE. 1986. Great

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
function (including its typical species)	**structure - Woodland edge (graduated edge; buffered; mosaics with other habitats)**	edge into adjacent semi-natural open habitats, other woodland/ wood-pasture types or scrub.	layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning. 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. The woodland is bordered by scrub and open grassland to the north (within the SAC boundary) and there are two permanent glades in the north and east of the wood.	Yews SSSI citation. NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate (private report)
Structure and function (including its typical species)	**Adaptation and resilience**	Maintain the resilience of the feature by ensuring a diversity of site-native tree species; although yew dominates, diversity is provided by a scattering of ash and oak.	The overall vulnerability of this SAC to climate change has been assessed by Natural England (2015) as being low, taking into account the sensitivity, fragmentation, topography and management of its habitats. This means that this 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 advisable. 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 sea levels, precipitation and temperature for example, which are likely to affect the extent, distribution, composition and functioning of a feature within a site. The vulnerability and response of features to such changes will vary. Using best available information, any necessary or likely adaptation or adjustment by the feature and its management in response to actual or expected climatic change should be allowed for, as far as practicable, in order to ensure the	ENGLISH NATURE. 1986. Great Yews SSSI citation. NORTON, P and MILNER, H. 2017. Great Yews: Tree Characteristics and Standing Volume. Private report for Longford Estate NATURAL ENGLAND, 2015. Climate Change Theme Plan and supporting National Biodiversity Climate Change Vulnerability assessments ('NBCCVAs') for SACs and SPAs in England [Available at http://publications.naturalengland.org.uk/publication/4954594591375360].

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			feature's long-term viability. *Chalara fraxinea* has recently been found in ash trees in the wood. This may, however, allow better opportunities for yew regeneration in the longer term.	
Structure and function (including its typical species)	**Regeneration potential**	Restore the potential for sufficient natural regeneration of desirable trees and shrubs; typically tree seedlings of desirable species (measured by seedlings and <1.3m saplings - above grazing and browsing height) should be visible in sufficient numbers in gaps, at the wood edge and/or as regrowth as appropriate.	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. Browsing and grazing levels must permit regeneration at least in intervals of 5 years every 20. 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. There is considerable vegetative regeneration of yew through extensive branch layering. Yew seedlings are present; these require protection and potentially translocation to more open locations in order to grow on into mature individuals.	NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate NORTON, P and MILNER, H. 2017. Great Yews: Tree Characteristics and Standing Volume. Private report for Longford Estate NATURAL ENGLAND. 2007. Higher Level Stewardship agreement Woodland Management Plan. Available from Natural England. This attribute will be periodically monitored as part of Natural England's SSSI condition assessments
Structure and function (including its typical species)	**Tree and shrub species composition**	Maintain a canopy and under-storey of which 95% is composed of site native trees and shrubs including: Yew *Taxus baccata* Ash *Fraxinus excelsior* Pedunculate oak *Quercus robur* Hawthorn *Crataegus monogyna*, Hazel *Corylus avellana* Goat willow *Salix caprea*	Native trees and shrubs in general support a greater diversity of associated species than non-native species, especially amongst groups of invertebrates which depend directly on trees for food and shelter. There are many plants and animals which use or co-exist with non-native trees, but many rare and threatened woodland species are specialists adapted to one or a few native trees or shrub species (birches, willows and oaks, are examples of trees that host many specialist insect species).	ENGLISH NATURE. 1986. Great Yews SSSI citation. NORTON, P and MILNER, H. 2017. Great Yews: Tree Characteristics and Standing Volume. Private report for Longford Estate This attribute will be periodically

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		Blackthorn *Prunus spinosa*	The wood is dominated by yew, with occasional mature ash and oak and ash regeneration where light allows. Shrub species are very sparse under the yews, but are associated with areas of broadleaved trees and scrub.	monitored as part of Natural England's SSSI condition assessments
Structure and function (including its typical species)	**Key structural, influential and/or distinctive species**	Maintain the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature: Yew *Taxus baccata* Ash *Fraxinus excelsior* Pedunculate oak *Quercus robur* Hawthorn *Crataegus monogyna*, Hazel *Corylus avellana* Sedges *Carex spp.*	Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include; • **Structural** species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). • **Influential** species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat) • **Site-distinctive** species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary. The list of species given here for this Annex I habitat feature at this SAC is not necessarily exhaustive. The list may evolve, and species may be added or deleted, as new information about this site becomes available. The ground flora at Great Yews SAC is very restricted beneath the yew canopy, but under the broad-leaved trees and along the rides there is a greater variety of herbaceous plants. These include nettle-leaved bellflower *Campanula trachelium*, woodruff *Galium odoratum*, common twayblade *Listera ovata*	ENGLISH NATURE. 1986. Great Yews SSSI citation.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			and early purple orchid *Orchis mascula*. Ferns are well represented and include common and scaly male fern *Dryopteris filix-mas* and *D. affinis*, broad and narrow buckler fern *D. dilatata* and *D. carthusiana* and polypody *Polypodium vulgare.* The glades contain areas of herb-rich chalk grassland with abundant chalk milkwort *Polygala calcarea*, glaucous and spring sedges *Carex flacca* and *C. caryophyllea* and occasional kidney vetch *Anthyllis vulneraria* and rock rose *Helianthemum nummularium.*	
Structure and function (including its typical species)	**Invasive, non-native and/or introduced species**	Ensure invasive and introduced non-native species are either rare or absent, but if present are causing minimal damage to the feature	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). Such species can include Rhododendrons, snowberry, Japanese knotweed, giant hogweed and Himalayan balsam, for example. Similarly, this would include pheasants, rabbits and non-native invertebrate 'pest' species. No invasive or introduced non-native species are known to be present.	NORTON, P and MILNER, H. 2014. Great Yews: A Woodland on the Longford Estate. Private report for Longford Estate
Structure and function (including its typical species)	**Soils, substrate and nutrient cycling**	Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the 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	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			ecological structure, function and processes associated with this Annex I feature.	
Supporting processes (on which the feature relies)	**Functional connectivity with wider landscape**	Maintain the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site	This recognises the potential need at this site to maintain or restore the connectivity of the site to its wider landscape in order to meet the conservation objectives. These connections may take the form of landscape features, such as habitat patches, hedges, watercourses and verges, outside of the designated site boundary which are either important for the migration, dispersal and genetic exchange of those typical species closely associated with qualifying Annex I habitat features of the site. These features may also be important to the operation of the supporting ecological processes on which 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. Hedgerows provide some connectivity to a smaller yew woodland, Little Yews, a mile to the north east.	
Supporting processes (on which the feature relies)	**Air quality**	Restore as necessary, the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk). Currently the Critical Load for nitrogen deposition of conifer woodland (5-15kg N/ha/yr) are significantly exceeded (average 30kg N/ha/yr).	This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it. Critical Loads and Levels are recognised thresholds below which such harmful effects on sensitive UK habitats will not occur to a significant level, according to current levels of scientific understanding. There are critical levels for ammonia (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	More information about site-relevant Critical Loads and Levels for this SAC is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk).

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			such as Halogens, Heavy Metals, POPs, VOCs or Dusts. These should be considered as appropriate on a case-by-case basis. Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-natural habitats are still under development. It is recognised that achieving this target may be subject to the development, availability and effectiveness of abatement technology and measures to tackle diffuse air pollution, within realistic timescales.	
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.	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. This attribute and target are included because disruption/ damage to hydrological processes could be caused by activities at some distance from the site boundary. E.g. through extraction of ground or surface waters; diverting or damming river channels; pollution of water source; channel alignment that disrupts natural geomorphological processes; tunnelling etc.	
Supporting processes (on which the feature relies)	**Illumination**	Ensure artificial light is maintained to a level which is unlikely to affect natural phenological cycles and processes to the detriment of the feature and its typical species at this site.	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. 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.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Older yew trees can get overtopped by other broadleaved trees. However, younger trees can tolerate shade quite well. There is currently little available information or studies concerning illumination effects and yew trees.	
Version Control N/A				
Variations from national feature-framework of integrity-guidance: **Vegetation structure: open space**: target changed to 5% to reflect the situation on this site.				