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

Dover to Kingsdown Cliffs Special Area of Conservation (SAC)
Site Code: UK0030330

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About this document

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

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

Where this site overlaps with other European Sites, you should also refer to the separate European Site Conservation Objectives and Supplementary Advice (where available) provided for those sites.

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	Dover to Kingsdown Cliffs Special Area of Conservation (SAC)
Location	Kent
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	183.85 hectares
Designation Changes	N/A
Feature Condition Status	Details of the feature condition assessments made at this site can be found using Natural England's Designated Sites System
Names of component Sites of Special Scientific Interest (SSSIs)	Dover to Kingsdown Cliffs SSSI
Relationship with other European or International Site designations	The site partially overlaps with Dover to Deal Marine Conservation Zone.

Site background and geography

Dover to Kingsdown Cliffs SAC is partially situated within the North Downs National Character Area (NCA Profile 119). The site comprises an area of coastline from Dover Harbour to Kingsdown that is of geological and physiographic importance, as well as for its outstanding biological interest which includes many rare species. The range of habitats include cliff-top grasslands, chalk cliffs and a broad shingle beach.

The vegetated cliffs support a variety of maritime cliff communities found on chalk substrates, distributed according to different levels of exposure to wind and salt spray. The most exposed, lowest parts of the cliff face support rock-crevice communities with rock samphire *Crithmum maritimum*, rock sea-lavender *Limonium binervosum* and thrift *Armeria maritima*, with the rare hoary stock *Matthiola incana* in places. On more sheltered slopes there is a community restricted to south-facing chalk cliffs characterised by wild cabbage *Brassica oleracea*.

The vegetation of the cliff tops consists mainly of chalk grassland interspersed with areas of scrub. Much of the grassland is dominated by tor-grass *Brachypodium pinnatum* or upright brome *Bromopsis erecta*, though there are numerous areas of species-rich open grassland with a range of typical chalk-turf grass and herb species. These include sheep's-fescue *Festuca ovina*, salad burnet *Sanguisorba* minor, wild thyme *Thymus praecox* and horseshoe vetch *Hippocrepis comosa*.

The invertebrate fauna of the site is rich and there are numerous breeding sea birds along the cliffs. Additionally the site includes important chalk foreshore habitats, supporting the most species-rich littoral chalk algal flora in South East England. A number of nationally rare plants occur, including early spider

orchid *Ophrys sphegodes* and oxtongue broomrape *Orobanche artemisiae-campestris*, which in the UK is confined to unstable coastal chalk cliffs of southern England, and has a stronghold on this site.

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:

- **H1230. Vegetated sea cliffs of the Atlantic and Baltic coasts**

Dover to Kingsdown cliffs support a full zonation of maritime cliff communities found on chalk substrates, reflecting different levels of exposure to wind and salt spray. The most exposed, lowest parts of the cliff face support rock-crevice communities with rock samphire *Crithmum maritimum*, rock sea lavender *Limonium binervosum* and thrift *Armeria maritima*, with the rare hoary stock *Matthiola incana* in places. On more sheltered slopes there is a community restricted to south-facing chalk cliffs characterised by wild cabbage *Brassica oleracea*. There are good para-maritime grassland transitions to chalk grassland. The endangered oxtongue broomrape *Orobanche artemisiae-campestris*, confined in the UK to unstable coastal chalk cliffs of southern England, has a stronghold on this site. The cliffs are internationally important as a stratigraphic reference site for chalk cliff exposures.

- **H6210. Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco Brometalia*) (important orchid sites); Dry grasslands and scrublands on chalk or limestone (important orchid sites)**

This site hosts the priority habitat type "orchid rich sites". Dover to Kingdown Cliffs is situated on the chalk of the North Downs and consists largely of NVC type *CG4 - Brachypodium pinnatum* and CG5 - *Bromus erectus - Brachypodium pinnatum* lowland calcareous grassland. There are numerous areas of species-rich open grassland with a range of typical chalk-turf grass and herb species. These include sheep's fescue *Festuca ovina*, salad burnet *Sanguisorba minor*, wild thyme *Thymus praecox*, and horseshoe vetch *Hippocrepis comosa*. A number of nationally-rare plants occur. These include early spider orchid *Ophrys sphegodes* and ox-tongue broomrape *Orobanche loricata* which are both at the northern extreme of a continental distribution.

Table 1: Supplementary Advice for Qualifying Features: H1230. Vegetated sea cliffs of the Atlantic and Baltic coasts

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution	**Extent of hard or soft cliff capable of supporting sea cliff vegetation**	Maintain the total extent of the cliff system which is capable of supporting H1230 sea cliff vegetation to 7.34km	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. The whole system acts to provide the range and variation of vegetation types and mosaics with bare ground. Extent may be measured in different ways but there are issues with measuring area of vertical cliffs. Reduction in extent can include smothering cliff slope, cliff foot or cliff top surfaces by artificial or dumped materials. It is likely to be very difficult to make accurate assessments of extent for certain habitats, especially if they form complex mosaic with other habitats. The emphasis here should be more on assessing whether any component habitat has been obviously reduced by anthropogenic factors, such as agricultural development, fly tipping, etc.	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England)
Extent and distribution	**Spatial distribution of the feature**	Maintain the distribution and continuity of the habitat and any associated transitions which	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	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
	within the site	reflects the natural functioning of the cliff system	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 Annex I habitat feature. Transitions include cliff top and cliff foot transitions to terrestrial or marine habitats.	Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England)
Extent and distribution	**Future extent of habitat within the site and ability to respond to seasonal changes**	Maintain active processes such that the system can adjust to longer-term natural change, including landward recession, and that fluctuations in the extent of vegetated areas to bare rock occur over time and space within the site.	This recognises the need to allow for natural fluctuations in the extent and the distribution of this habitat feature, often during particular seasons and usually as a result of natural coastal processes.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	**Geomorphological naturalness**	Maintain the geomorphological naturalness of the sea cliff system (from cliff top to foreshore connection with the intertidal zone	The physical landforms associated with this habitat feature, and the processes that shape them, will be a primary influence on sea-cliff habitat. A key criteria for selecting SACs for this habitat feature was that they had no or minimal artificial modification and so demonstrates good geomorphological naturalness. Having a well-developed sea-cliff structure shaped by natural geomorphological processes, will ensure the full range of natural variation can occur.	South East Coastal Group. (2006). *South Foreland to Beachy Head Shoreline Management Plan.* Available at: https://www.se-coastalgroup.org.uk/wp-content/uploads/2012/02/SF2BH-SMP_Main-Doc.pdf
Structure and function (including its typical species)	**Presence of mosaic of microhabitats**	Maintain the diversity and range of microhabitats and bare areas resulting from active coastal processes/landslips	Each site will have a different configuration of geology and hydrology and maritime exposure, which will also change over time and space. The key aim is to maintain the full, naturally expected range of these in as natural a state as possible.	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
				SSSI (Available on request from Natural England)
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 types MC1 - *Crithmum maritimum - spergularia rupicola* MC4 - *Brassica oleracea* MC8 - *Festuca rubra - Armeria maritime* MC11 - *Festuca rubra - Daucus carota sudsp gummifer*	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). The presence, composition, location and extent of maritime scrub, heath and/or grassland plus mosaics of the three, on cliff slopes or cliff tops will be determined by the interaction of natural geo-morphologcial processes with exposure and soil characteristics and management where relevant.	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England)
Structure and function (including its typical species)	**Vegetation: undesirable species**	Maintain the frequency/cover of the following undesirable species to within acceptable levels and prevent changes in surface condition, soils, nutrient levels or hydrology which may encourage their spread.	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. There are a range of non-native plants affecting coastal cliffs, and due to difficulties of access, these often pose problems with management. The key objective is to prevent any introductions or planting. This includes the dumping of spoil or organic waste on cliff tops or slopes within or beyond the site boundary which may contain plant seeds or propagules or enrich the site. Undesirable species include: *Cirsium arvense; Cirsium vulgare; Lolium perenne; Rumex obtusifolius; Rumex crispus; Senecio jacobaea; Trifolium repens; Urtica dioica.*	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England) 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)
Structure and function (including its typical species)	**Key structural, influential and/or distinctive species**	Maintain the abundance of the typical species listed below to enable each of them to be a viable component of the Annex 1 habitat; • Constant and preferential plant species of MC1, MC4, MC8 and MC12 NVC communities which are the main component of the H1230 feature within the SAC	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; • **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.	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England)
Structure and function (including its typical species)	**Regeneration potential**	Maintain semi-natural vegetation on the cliff-top (either within or beyond the site boundary as appropriate), and its connectivity with the lower cliff slopes.	This is important to ensure that there is a continuous supply of seed-rich semi-natural vegetation material from the clifftops to feed the sea-cliff system below. As the top of the cliff slumps and recedes as a result of natural processes, the vegetation dropping onto the lower slopes should provide suitable material for their re-colonisation with native plant species from adjacent semi-natural habitats above	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting processes (on which the feature relies)	**Physical features supporting vegetation: crevices, ledges, isolated**	Maintain the associated physical components of the vegetated cliff feature (crevices, ledges, isolated stacks) with changes to them determined by natural processes only	Cliff structure and geomorphological processes are major influences on sea-cliff vegetation. 'Hard' cliffs with vertical or very steep faces are characteristic of hard igneous, metamorphic and sedimentary rocks and also of chalk, which, although a soft rock, nevertheless forms vertical cliffs. More mobile 'Soft' cliffs have a sloping or slumped profile, often with a distinct 'undercliff'; these occur on a range of soft rocks, or on	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
	stacks etc		hard rocks interspersed with softer deposits and may be subject to mudslides or landslips. These processes all create smaller structural elements such as ledges, crevices and stacks which create complexes of pioneer and more mature vegetation which are typical of this habitat feature.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting processes (on which the feature relies)	**Hydrology/ drainage**	At a site, unit and/or catchment level 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.	
Supporting processes (on which the feature relies)	**Maritime exposure including salt spray effects**	Maintain an appropriate degree of exposure to maritime effects, such as salt spray, both from regular inputs and storm events	Excessive exposure to salt spray can cause episodic die-back of sea cliff vegetation in some circumstances, although this may not be applicable to all sites.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
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).	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 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	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). NATURAL ENGLAND. (2014). *Site Improvement Plan; Dover to Kingsdown Cliffs SAC.*

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			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)	**Cliff morphology, slope and elevation**	Maintain the natural processes that determine cliff morphology, slope and elevation	These physical components greatly influence the structure of this habitat type. Allowing natural dynamic processes to operate is important to providing optimal conditions which will allow the long-term conservation of this habitat feature. Interruption of these processes, through partial stabilisation or slowing of cliff erosion and recession rates, with artificial management of cliff slope vegetation, does not produce naturally-occurring conditions which could lead to undesirable changes in characteristic sea cliff vegetation.	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England) This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Version Control Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: The attribute **Water Quality / Quantity** has been removed as the H1230 feature at this SAC is not dependant on surface water and/or ground water.				

Table 2: Supplementary Advice for Qualifying Features: H6210. Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia) (important orchid sites); Dry grasslands and scrublands on chalk or limestone (important orchid sites) *

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 at 62.3 hectares.	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. 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.	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England) 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 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	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			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 types CG4 *Brachypodium pinnatum grassland* CG5 *Bromus erectus - Brachypodium pinnatum grassland;*	This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC). Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. This will also help to conserve their typical plant species (i.e. the constant and preferential species of a community), and therefore that of the SAC feature, at appropriate levels (recognising natural fluctuations).	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request 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)	**Vegetation: proportion of herbs (including Carex spp)**	Restore as necessary the proportion of herbaceous species within the range 40%-90%	A high cover of characteristic herbs, including sedges (Carex species) is typical of the structure of this habitat type. Surveys indicate that the proportion of herbs is not consistent across the site. A low proportion of herbs to grasses outside target (40-90% herbs) indicates eutrophication, usually from fertilisers, or insufficient removal of biomass, leading to dominance by grasses.	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request 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)	**Key structural, influential and/or distinctive species**	Restore as necessary the abundance of the typical species listed below to enable each of them to be a viable component of the Annex 1 habitat; • Constant and preferential plant species of CG4 and CG5 NVC communities	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; • **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	NATURAL ENGLAND. (2007). Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft) Dover – Kingdown Cliffs SSSI (Available on request from Natural England) This attribute will be periodically

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		which are the main component of the H6210 feature within the SAC • Vascular plant assemblage including: Early Spider Orchid *Ophrys sphegodes*; Ox-tongue broomrape *Orobanche artemisiae-campestris*; Meadow Clary *Salvia pratensis;* Nottingham Catchfly *Silene nutans;* Slender Bedstraw *Galium pumilum;* Burnt Orchid *Orchis ustulata*	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. Surveys indicate that the presence of desirable species is not consistent across the site.	monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	**Vegetation: undesirable species**	Restore as necessary 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.	There will be a range of undesirable or uncharacteristic species which, if allowed to colonise and spread, are likely to have an adverse effect on the feature's structure and function, including its more desirable typical species. These may include invasive non-natives such as Cotoneaster spp, or coarse and aggressive native species which may uncharacteristically dominate the composition of the feature. Surveys indicate that the presence of undesirable species is not consistent across the site. Undesirable species include: *Cirsium arvense; Cirsium vulgare; Rumex crispus; Rumex obtusifolius; Senecio jacobaea; Urtica dioica.*	NATURAL ENGLAND. (2007). *Conservation Objectives and Definitions of Favourable Condition for Designated Features of Interest (Consultation Draft).* This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	**Vegetation community transitions**	Maintain the pattern of natural vegetation zonations/transitions	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	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			habitat feature, and support additional flora and fauna.	
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 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.	
Structure and function (including its typical species)	**Supporting off-site habitat**	Restore the extent, quality and spatial configuration of land or habitat surrounding or adjacent to the site which is known to support the feature.	The structure and function of the qualifying habitat, including its typical species, may rely upon the continued presence of areas which surround and are outside of the designated site boundary. Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species. This supporting habitat may be critical to the typical species of the feature to support their feeding, breeding, roosting, population dynamics ('metapopulations'), pollination or to prevent/reduce/absorb damaging impacts from adjacent land uses e.g. pesticide drift, nutrient enrichment. There are additional areas of lowland calcareous grassland and deciduous woodland that connect to the SAC and contribute to the grassland ecological network. Approximately 0.2km of these priority habitats are situated within Dover to Kingstown Cliffs SSSI.	
Structure and function (including its typical species)	**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	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.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Where there is a lack of detailed knowledge of the connectivity requirements of the qualifying feature, Natural England will advise as to whether these are applicable on a case by case basis.	
Structure and function (including its typical species)	**Adaptation and resilience**	Maintain the H6210 feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site	This recognises the increasing likelihood of natural habitat features to absorb or adapt to wider environmental changes. Resilience may be described as the ability of an ecological system to cope with, and adapt to environmental stress and change whilst retaining the same basic structure and ways of functioning. Such environmental changes may include changes in sea levels, precipitation and temperature for example, which are likely to affect the extent, distribution, composition and functioning of a feature within a site. The vulnerability and response of features to such changes will vary. Using best available information, any necessary or likely adaptation or adjustment by the feature and its management in response to actual or expected climatic change should be allowed for, as far as practicable, in order to ensure the feature's long-term viability. The overall vulnerability of this SAC to climate change has been assessed by Natural England (2015) as being moderate taking into account the sensitivity, fragmentation, topography and management of its habitats. This means that this site is considered to be vulnerable overall but moderately so. This means that some adaptation action for specific issues may be required, 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.	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
Supporting processes	**Air quality**	Maintain as necessary, the concentrations and deposition of	This habitat type is considered sensitive to changes in air quality. Critical Loads and Levels are recognised thresholds	More information about site-relevant Critical Loads and Levels

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
(on which the feature relies)		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).	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. 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.	for this SAC is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk). NATURAL ENGLAND. (2014). *Site Improvement Plan; Dover to Kingsdown Cliffs SAC.*
Supporting processes (on which the feature relies)	**Conservation measures**	Restore the management measures (either within and/or outside the site boundary as appropriate) which are necessary to restore the structure, functions and supporting processes associated with the feature	Active and ongoing conservation management is needed to protect, maintain or restore this feature at this site. Further details about the necessary conservation measures for this site can be provided by contacting Natural England. This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements. Inappropriate scrub control should be tackled by controlling relatively small areas of scrub. Undergrazing should be controlled by ensuring that relatively small areas are grazed.	NATURAL ENGLAND. (2014). *Site Improvement Plan; Dover to Kingsdown Cliffs SAC.*
Version Control Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: N/A				