



Kent Team
The Countryside Management Centre
Coldharbour Farm
Wye, Ashford
Kent
TN25 5DB
Tel: +44 (0)1233 812525
Fax: +44 (0)1233 812520
Email: _dannah@english-nature.org.uk

SAC: Dungeness
SPA: Dungeness to Pett Level
Component SSSI: Dungeness

Conservation objectives for the European interest on the SSSI

The conservation objectives for the European interests on the SSSI are:

subject to natural change, to maintain*, in favourable condition, the:

- Annual vegetation of drift lines
- Perennial vegetation of stony banks

to maintain*, in favourable condition, the habitats for the population of:

- Great crested newt (*Triturus cristatus*)

to maintain*, in favourable condition, the habitats for the populations of Annex 1 species + of European importance, with particular reference to:

- standing water
 - shingle
 - marshy grassland
 - arable

+ Bewick's Swan, common tern, Mediterranean Gull

to maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:

- Standing water
 - marshy grassland

+ Shoveler

* maintenance implies restoration if the feature is not currently in favourable condition.

The conservation objectives for the Dungeness Special Area of Conservation are, in accordance with para C 10 of PPG 9, the reasons for which the SAC was designated.

The conservation objectives for Dungeness to Pett Level Special Protection Area are, in accordance with para C10 of PPG 9, the reasons for which the SPA was classified.

The SAC includes land within: Dungeness SSSI and Rye Harbour SSSI

The SPA includes land within: Camber Sands and Rye Saltings SSSI, Dungeness SSSI, Pett Level SSSI and Rye Harbour SSSI.

Favourable Condition Table for Dungeness SSSI

The Favourable Condition Table will be used by English Nature and other relevant authorities to determine if a site is in favourable condition. Favourable condition is achieved when the targets given below are met.

The favourable condition table should inform the scope and nature of any ‘appropriate assessment’ under the Habitats Regulations, but an appropriate assessment will also require consideration of issues specific to the individual plan or project. The favourable condition table does not by itself provide a comprehensive basis on which to assess plans and projects as required under Regulations 20-21, 24, 48-50 and 54 - 85. The scope and content of an appropriate assessment will depend upon the location, size and significance of the proposed project. English Nature will advise on a case by case basis.

Following an appropriate assessment, competent authorities are required to ascertain the effect on the integrity of the site. The integrity of the site is defined in para C10 of PPG9 as the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified. The determination of favourable condition is separate from the judgement of effect upon integrity. For example, there may be a time-lag between a plan or project being initiated and a consequent adverse effect upon integrity becoming manifest in the condition assessment. In such cases, a plan or project may have an adverse effect upon integrity even though the site remains in favourable condition.

Annual counts for qualifying bird species will be used by English Nature, in the context of five year peak means, together with available information on UK population and distribution trends, to assess whether the SPA is continuing to make an appropriate contribution to the Favourable Conservation Status of the species across Europe.

Operational feature	Criteria feature	Attribute	Measure	Target	Comment
Vegetated shingle	Annual vegetation of drift lines	Extent	<p>Area of annual vegetation of drift lines and the geomorphological structures that support this feature Length and width (m), of annual vegetation of drift lines, and percentage cover of vegetation, measured once per reporting cycle in late summer (July - September).</p> <p>Sample sites along the full stretch of coastline to be identified to cover approx 10% of the known extent of habitat.</p> <p>The area and % cover of vegetation should be mapped initially to provide a baseline, with monitoring occurring at intervals all around the coast.</p>	<p>No decrease in linear extent , width of community, and % cover of vegetation from baseline (yet to be established). Extent must take account of natural variation of this habitat as a result of dynamic coastal processes(storm events etc.). Indicative target-10% of vegetation maintained seasonally over the structure that could support it.</p>	<p>This attribute is dependent on there being sufficient shingle available to maintain the form of the shingle bank.</p> <p>Judgements in changes to extent/area will have taken particular care to distinguish changes as a result of natural functions vs. anthropogenic actions because of the highly variable nature of this habitat.</p> <p>In years following heavy storms the seeds for this community may be washed some distance inland, with much less vegetation found near the coast.</p>
		Mobility	<p>The linear extent and area of substrate suitable for colonisation by annual vegetation of drift lines not immediately constrained by introduced structures or landforms such as sea walls or groynes. Measured once per reporting cycle.</p> <p>Baseline study needs to</p>	<p>No increase in linear extent or area constrained by introduced structures or landforms or operations.</p> <p>These areas to be identified whilst undertaking baseline monitoring.</p>	<p>An important aspect of this habitat is its ability to modify its distribution in response to natural dynamic coastal processes. Introduction of physical constraints would reduce the extent of this community and affect the overall structure of the drift line communities.</p>

			identify introduced structures which limit the distribution of this plant.		
		Coastal processes	Number and location of coastal defence operations within the sediment cell disrupting the sediment supply to and within the site. Measured once per reporting cycle. Information on coastal processes should be available from SMPs	No disruption to the natural patterns of erosion and accretion within the site, or increase in the number of coastal defence operations disrupting the natural supply of sediment to the site.	Sediment budget within the site is influenced by sediment supply into the site. The south coast of Dungeness is eroding as the supply of shingle resulting from glacial erosion is exhausted. There would consequently be natural erosion from the south coast to the east coast, balancing the habitat available for the feature within the site. Coast defence work within the site can reduce the cover of this vegetation, as can operations which restrict the flow of shingle to the site, and are regarded as damaging. Operations which add shingle to the system for coast defence purposes, but which do not damage the vegetation feature are acceptable as the vegetation retains its current distribution, despite the disruption of natural coastal processes.
		Substrate	Presence of shingle and fine matrix in combination with surface or buried organic material	Maintain substrate through natural processes with sufficiently low levels of human-induced disturbance to allow drift line vegetation to complete its vegetation cycle. As an indicative target, drift line organic materials should be present along at least 10% of area surveyed, with artificial (non-organic) debris not restricting or suppressing vegetation establishment and growth. Targets appropriate to Dungeness will need to be established when the vegetation is subject to a baseline survey.	The combination of inorganic and organic substrate is an important precursor to development of annual vegetation of drift lines. Substrate (i.e. sediment) supply should be regulated by natural coastal processes. Drift line organic materials (tidal-derived seaweed, driftwood etc.) on the surface of and in combination with the shingle matrix are important sources of nutrients and anchoring points essential for vegetation development and survival and may play a part in maintaining a seed bank.
		Characteristic species of annual vegetation of drift lines	Presence of characteristic species of the annual vegetation of drift lines, particularly <i>Atriplex glabriuscula</i> . Assessments will need to be made during late summer (July - September)	Maintain the presence and broad distribution of stands of <i>Atriplex glabriuscula</i> dominated community and other local variants of drift line vegetation across the feature, allowing for natural variation. As these communities can be very variable, a local baseline will need to be established, but should not be lower than 10% of the area that could be colonised.	This community is found in a narrow strip at the extreme high water mark. Changes in the frequency and abundance of <i>Atriplex</i> should be expected to occur seasonally as a result of natural disturbance by storm events, but the community is sensitive to disturbance by human activities. Some of these communities do not fit well into the NVC classification but this is currently under review. Such communities are dominated by <i>Beta</i>

					and <i>Atriplex spp.</i> and show affinities to MC 6 <i>Atriplex hastata-beta vulgaris ssp maritima</i> Sea- bird cliff community. primarily annuals but perennials may occur in areas with greater stability.
--	--	--	--	--	--

Operational feature	Criteria feature	Attributes	Measure	Target	Comment
Vegetated shingle	Perennial vegetation of stony banks	Extent	Area (ha) of perennial vegetation of stony banks, and the area of geomorphological structures supporting them, measured once per reporting cycle	No decrease in extent or area from previous studies. Vegetation allowed to recover naturally in areas where it has been lost due to human-induced disturbance. Baseline to be established largely from Rob Fuller's vegetation survey (ITE, 1989), but will need ground checking in some areas and up-dating. Extent must take account of natural variation of this habitat as a result of dynamic coastal processes	This attribute is dependent on there being adequate area to support the whole range of vegetation communities which have been previously recorded on the site. Extent of the site will influence vegetation succession.
		Mobility	Percentage of linear extent and area of the active zone of shingle feature suitable for colonisation by perennial vegetation of stony banks immediately constrained by introduced structures or landforms, measured once per reporting cycle.	No increase in linear extent or area constrained by introduced structures or landforms	An important aspect of this habitat in the early stages of the succession near the coast, is its ability to modify its distribution in response to natural dynamic coastal processes. Introduction of physical constraints would reduce the extent of this community and affect the vegetation pattern. On more established stable parts of shingle structures, mobility is a less significant attribute.
		Coastal processes	Number and location of coastal defence operations within the sediment cell disrupting the sediment supply to and within the site. Measured once per reporting cycle. Information on coastal processes should be available from SMPs	No disruption to the natural patterns of erosion and accretion within the site, or increase in the number of coastal defence operations disrupting the natural supply of sediment to the site.	Sediment budget within the site is influenced by sediment supply into the site. The south coast of Dungeness is eroding as the supply of shingle resulting from glacial erosion is exhausted. There would consequently be natural erosion from the south coast to the east coast, balancing the habitat available for the feature within the site. Coast defence work within the site can reduce the cover of this vegetation, as can operations which restrict the flow of shingle to the site, and are regarded as damaging. Operations which add shingle to the system for coast defence purposes, but which do not damage the vegetation feature

					are acceptable as the vegetation retains its current distribution, despite the disruption of natural coastal processes.
		Substrate	Presence of shingle/sand in combination with surface or buried organic material	Maintain proportion of shingle/sand/organic matter, regulated entirely by natural processes.	The combination of inorganic and organic substrate, derived from natural processes, is an important factor in allowing the establishment and development of this type of vegetation. The presence of a fine matrix influences the water balance of the surface layers
		Lack of disturbance	Proportion of substrate not showing evidence of human disturbance. This can include evidence of path network proliferation, especially from access points/car parks/throughway; resulting in detached clumps of vegetation and broken surface layers; disturbance of bare shingle; loss of sorting and relief of the ridge system.	Maintain substrate with sufficiently low levels of human-induced disturbance to allow perennial vegetation to establish and undergo succession.	Much of the site has suffered disturbance in the past, sometimes excessively. If this has stopped, recovery of vegetation may be possible, but may be very slow, depending on the amount of fine matrix, the availability of a suitable seed source and possibly "soil" chemistry. If disturbance is continuous, recovery is unlikely to occur. Infrequent moderate disturbance may, in certain circumstances, initiate successional phases and can lead to the development of modified grassland communities
		Vegetation composition	Presence of vegetation communities characteristic of perennial vegetation of stony banks. Vegetation communities are likely to consist of one or more of the following (characterising species in brackets), starting from the east coast, and ending on the eroding south coast: Pioneer (<i>Crambe maritima</i> , <i>Rumex crispus</i>); Arrhenatherum grassland	Maintain range of specialist vegetation and its zonation precisely recorded on the site, taking account of natural variation. One or more of the characterising species for each range of communities should be at least frequent if the communities have been previously recorded on the site.	The range of vegetation is based on the surveys by Fuller, 1989, and Ferry Lodge and Waters (1990). The range of NVC-equivalent communities for this type of vegetation covers heaths, grasslands, (acid and mesotrophic), sand dunes, scrub, maritime cliff and saltmarsh and mires. Some communities are present as part of a succession following previous disturbance Disturbed shingle supports some species of interest, but should not be created deliberately at the expense of pristine communities. Despite this it is of some conservation interest and existing communities should be maintained. The wetland communities have changed considerably in the past 40 years, becoming

		<p>(<i>Arrhenatherum elatius</i>, <i>Silene maritima</i>, <i>Galium mollugo</i>, <i>Hypochaeris radicata</i> and <i>Pilosella officinarum</i>).</p> <p>Broom scrub (<i>Cytisus scoparius</i>, <i>Teucrium scorodonia</i>).</p> <p>Lichen "heath" with less than 30% grasses (<i>Dicranum scoparium</i>, <i>Cladonia</i> spp. <i>Rumex acetosella</i>, <i>Teucrium scorodonia</i> <i>Jasione montana</i>, <i>Silene nudicalis</i>);</p> <p>Maritime lichen "heath" (<i>Festuca rubra</i>, <i>Armeria maritima</i>, <i>Cladonia rangiformis</i>, <i>Lotus corniculatus</i>, <i>Geranium robertianum</i>).</p> <p>Scrub <i>Prunus spinosa</i>, <i>Ulex europaeus</i>, <i>Ilex aquifolium</i>, <i>Sambucus nigra</i> and <i>Rubus fruticosus</i> agg. (Epiphytic lichens may be prominent especially on the <i>Prunus</i>).</p> <p>Wetland. A variety of communities ranging from open fen to carr, with species such as <i>Carex disticha</i>, <i>Sphagnum</i> sp. <i>Galium palustre</i>, <i>Potentilla palustris</i>, <i>Lythrum salicaria</i>, <i>Iris pseudacorus</i>, <i>Thelypteris palustris</i> <i>Phragmites australis</i>, <i>Typha angustifolia</i> and <i>Salix</i></p>	<p>largely dominated by scrub. This habitat supports species of interest and as an ideal management should aim to maintain a variety of wetland communities.</p>
--	--	--	--

			<i>cinerea</i> . Disturbed shingle communities. <i>Plantago lanceolata</i> , <i>Echium vulgare</i> , <i>Glaucium flavum</i> , <i>Sedum acre</i> , <i>Senecio jacobaea</i> , <i>Festuca rubra</i> and <i>Poa compressa</i>		
		Vegetation negative indicators	Presence of negative indicator species including non-native species, invasive species indicative of changes in nutrient status and species not characteristic of typical communities.	No further increase in species not typically associated with the communities that define the feature. A baseline survey is required to determine the distribution and abundance of non-native species.	Changes in the extent and cover of invasive species usually indicate a change in conditions on a site, often as a result of anthropogenic activities which may promote rapid expansion or increase in cover. These are often initiated by changes in management. Such species include those identified as negative indicators for grasslands such as <i>Urtica dioica</i> , together with non-native species and scrub/trees.
		Vegetation patterning	Presence of vegetation patterns related to geomorphological structure (ridges and lows and size of shingle).	No reduction in extent of vegetation cover exhibiting relationship to geomorphological structure, taking account of natural variation	Vegetation patterns can be related to the physical characteristics of the substrate. Patterns of ridges and lows in particular reflect the variations in particle size which in turn affect water-holding capacity.
		Hydrological conditions	Impact of changes to hydrological conditions on extent and composition of both the wetland vegetation communities where they have been previously recorded, and the dry shingle.	Maintain hydrological conditions that will sustain specialist freshwater wetland vegetation communities, subject to natural variation	The water table can be adversely affected by water abstraction, whilst disturbance of the surface layers can affect the water-holding capacity of the surface layers (see substrate attribute). If wetland communities, where present, exhibit signs of reduction in freshwater supply, (long-term replacement of wetland species by scrub or dry grassland species or species of brackish conditions), or patches of deep rooted vegetation on shingle such as <i>Prunus spinosa</i> die that cannot be attributed to natural variation, further detailed studies of hydrological conditions may be needed.

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
Ponds/ditches	Great crested newt	Presence of Great crested newt	Continued presence of Great crested newt	Record of species, in each sub-population, every year where adequate monitoring of ponds is possible.	Record by observation at any life stage. Note though that newt meta-populations sometimes show natural patterns of extinction and recolonisation within different ponds in a metapopulation.
		Presence of ponds and ditches.	Ponds and ditches (permanent and temporary) to remain in suitable numbers to sustain the size and range of population.	Maintain, the range of the newts across the site, and the number of breeding ponds (bearing in mind that newt distribution in a meta-population may vary naturally over a period of time). Those ponds identified prior to March 2000 are shown on Map 1, with further information held on a Map Info Workspace held at English Nature's Wye Office. In 2000 there were three distinct metapopulations, as shown below the the numbers of breeding ponds reported at each (excluding records of adult newts in fish ponds). Lydd Ranges - 5 ponds. RSPB reserve - 12 ponds. Lydd airport - 9 ponds In addition there is a breeding population in a ditch on the ARC land.	Photographs are needed of all known ponds as part of a baseline study. Not all of the ponds on the Dungeness SAC have been surveyed to date, and new ponds are likely to be made. It is possible therefore that the known range of this species on the site will expand.
		Pollution	Absence of pollution	Slight pollution may be acceptable. Minor algal or duckweed blooms are not necessarily a problem. Pollution is unacceptable if it affects the viability of the pond as a great crested newt site.	If significant pollution is found the source needs to be found and addressed. If pollution problem will not clear of itself within one season advice should be sought on cleaning the pond. Note 50% of great crested newt eggs are inviable due to an entirely natural phenomenon.
		Extent (depth and	Ponds should be of sufficient size and	Premature desiccation (ie before mid-July) is acceptable for all ponds in two out of three years	

		persistence).	depth to avoid desiccation over the course of the breeding/ tadpole development season (February to mid-August) for at least one in every three years. Ponds to be found throughout the site.	provided highly successful recruitment in third year. Three consecutive years of desiccation of all the ponds in a meta-population, with no recruitment, should be considered unfavourable. Deeper ponds are acceptable where there is no chance of colonisation by fish.	
		Shading	Extent of shading	Ponds should be kept in a predominantly open state, with cover by emergent fen vegetation or trees restricted to less than 25%. On grazing marsh ditches stands of emergent vegetation should be allowed to choke 50-75% of the ditches, with small sections along the ditch cleared to open water. (The stands of emergent vegetation offer suitable terrestrial habitat during the summer, and partial clearance is less likely to encourage colonisation by sticklebacks).	
		Fish	Absence of fish in majority of ponds.	Unfavorable if any fish are found to be present, including sticklebacks, in more than 10% of potential breeding ponds in each of the three metapopulations. Ditches supporting newts should be kept isolated from the main ditch network to avoid fish colonisation.	Action is less important if pond is likely to desiccate or if, for any reason, good levels of recruitment are found (tadpole counts).
		Extent	Total area of site as notified Area of suitable newt habitat to mapped during baseline study.	No loss of area or fragmentation of site. No barriers to newt movement between ponds	See map 2.
		Habitat structure and quality	Structural variety of vegetation or habitat features within site	Extensive, structurally varied habitats in close proximity (or continuous with) breeding pools offering shelter from desiccation, high summer temperatures, and low winter temperatures. Features that offer these conditions include woodland, scrub,	Type of habitat varies between sites. Record condition of site at time of selection and define components of structural variety. Absence or only small areas of such habitat may be

				rough grassland and fen, and may also be offered by a variety of substrates including coarse shingle, rubble, wood, and other debris.	unfavourable.
--	--	--	--	---	---------------

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
Standing water, Shingle, Marshy Grassland Arable	Populations of European importance and annex 1 and migratory populations of European importance: Bewick's swan, common tern, Mediterranean gull and shoveler.	Extent of habitat	Area (ha), measured periodically (frequency to be determined).	No significant decrease from reference level, subject to natural change.	All seabirds and waterfowl. Reference level to be determined
		Disturbance in roosting and feeding areas	Human disturbance absent or at a low level, measured periodically (frequency to be determined).	No significant displacement of birds attributable to human disturbance from reference level.	All seabirds and waterfowl. Methodology for assessing target to be determined. Reference level to be determined
		Landscape	Open terrain relatively free of obstructions (feeding, anti-predator, roosting),	No significant reduction in view-lines in feeding and roosting areas.	Bewick's Swan prefer unrestricted views over >500 metres to allow early detection of predators when feeding and roosting.

			measured periodically (frequency to be determined).		Methodology for assessing target to be determined. Reference level to be determined
Standing Water	Populations of European importance and annex 1 and migratory populations of European importance: Bewick's swan, common tern, Mediterranean gull and shoveler.	Food availability	Presence and abundance of aquatic plants, measured periodically (frequency to be determined).	No significant reduction in presence and abundance of food species from reference level.	Potamogeton, Ceratophyllum, Zannichellia, Myriophyllum, Chara spp. for Bewick's swan <i>Scirpus, Eleocharis, Carex, Potamogeton and Glyceria</i> for shoveler.
			Abundance of aquatic invertebrates, measured periodically (frequency to be determined).	No significant reduction in presence and abundance of food species from reference level.	Prey species floating or just below the water surface during the winter season, including Hydrobia, caddisfly, beetles, crustaceans, diptera are important for shoveler. Methodology for assessing target to be determined. Reference level to be determined
		Water area	Large open areas of water (feeding, roosting), measured periodically (frequency to be determined).	No significant reduction in water area, from a reference level.	One or more freshwaters >10ha Bewick's swan use these water bodies in greatest numbers when floods at Cheyne Court are dry.

		Water depth	Extensive shallow water (feeding), measured periodically (frequency to be determined).	Water depths should not deviate significantly.	Bewick's swan require a water depth of <1m Shoveler require a water depth of <30cm.
Shingle	Populations of European importance	Landscape	Open terrain relatively free of obstructions (feeding, anti-predator, roosting), measured periodically (frequency to be determined).	No significant reduction in view-lines in feeding and roosting areas in relation to reference level.	Nesting seabirds require unrestricted viewlines for early detection of predators. Methodology for assessing target to be determined. Reference level to be determined
		Vegetation characteristics	Range of vegetation heights and presence of bare ground for colonial nesting , measured periodically (frequency to be determined).	Sward height and density throughout areas used for nesting should not deviate significantly from an established baseline.	Mediterranean gulls require sward heights of between 10-30 cm in nesting areas. Common terns require short vegetation of <cm and bare ground, with areas of longer vegetation providing cover, subject to natural change.
Standing water	Populations of European importance	Food availability	Presence and abundance of freshwater fish , measured periodically (frequency to be determined).	No significant reduction in presence and abundance of food species in relation to reference level, subject to natural change.	Coarse fish, crustacea and annelids are important for common tern.
All habitats	Populations of European importance	Food availability	Presence and abundance of fish, ground-surface and aquatic invertebrates, measured periodically (frequency to be determined).	Presence and abundance of prey species should not deviate significantly from a reference level, subject to natural change.	Gobies, earthworm, snails, beetles, lepidoptera, grasshoppers, spiders and dipteran flies are important for feeding Mediterranean gull.