



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

Fens Pools Special Area of Conservation (SAC) Site code: UK1003757



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Page 1 of 13

About this document

This document provides Natural England's supplementary advice about the European Site Conservation Objectives relating to Fens Pools SAC. This advice should therefore be read together with the SAC Conservation Objectives which are available <u>here</u>.

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 <u>HDIRConservationObjectivesNE@naturalengland.org.uk</u>

About this site

European Site information

Name of European Site	Fens Pools Special Area of Conservation (SAC)
Location	Staffordshire
Site Maps	The designated boundary of this site can be viewed <u>here</u> on the MAGIC website
Designation Date	27.09.1989
Qualifying Features	Great crested newt Triturus cristatus
Designation Area	20.4ha
Designation Changes	N/A
Feature Condition Status	Details of the feature condition assessments made at this site can be found using Natural England's <u>Designated Sites System</u>
Names of component Sites of Special Scientific Interest (SSSIs)	Fens Pools SSSI
Relationship with other European or International Site designations	The SAC covers the northern 20.4ha of the SSSI (38.42ha)
Other information	Natura 2000 Standard Data Form for Fens Pools SAC

Site background and geography

Fens Pools is a 20 hectare SAC and a 38 hectare SSSI situated in the suburban borough of Dudley in Staffordshire. The site comprises of three canal feeder reservoirs and a series of smaller pools. They overlie marks and coal measures of the Carboniferous period.

The site shows evidence of past industrial activities and includes a wide range of habitats from open water, swamp, fen and inundation communities to unimproved neutral and acidic grassland and scrub. Great crested newts *Triturus cristatus* occur as part of a nationally significant amphibian assemblage.

Fens Pools is the best amphibian site known in the West Midlands. Amphibians inhabit the whole site, using the pools for breeding. The community includes common frog *Rana temporaria*, common toad *Bufo bufo* and exceptional numbers of both smooth and great crested newts (*Triturus vulgaris* and *T. cristatus* respectively).

The swamp, fen and inundation communities associated with the open water include county rarities such as mares-tail *Hippuris vulgaris*, common club-rush *Schoenoplectus lacustris*, orange foxtail *Alopecurus aequalis* and lesser waterparsnip *Berula erecta*. Species-rich areas of marshy grassland and acidic flush contain a range of sedges *Carex demissa*, *C. flacca* and *C. otrubae*, as well as common fleabane *Pulicaria dysenterica*, hemp-agrimony *Eupatorium cannabinum* and an extensive population of southern marsh orchid *Dactylorhiza praetermissa*. Adders-tongue *Ophioglossum vulgatum*, a rare plant in the county, is associated with an area of unimproved neutral grassland which is species-rich and shows

evidence of historic 'ridge and furrow' cultivation.

Associated wildlife interest of the site includes at least 10 species of dragonfly including the locally uncommon emperor dragonfly *Anax imperator* and migrant hawker *Aeshna mixta*. Over 20 species of butterfly have been recorded including locally uncommon species such as dingy skipper *Erynnis tages* and green hairstreak *Callophrys rubi*. Breeding birds include great crested grebe *Podiceps cristatus*, lesser whitethroat *Sylvia curruca*, reed warbler *Acrocephalus scirpaceus*, sedge warbler *A. schoenobaenus* and, occasionally, little ringed plover *Charadrius dubius*. Water rail *Rallus aquaticus* and goldeneye *Bucephala clangula* are regular winter visitors.

Set within the <u>National Character Area of Cannock Chase and Cank Wood</u>, the site's grasslands and pools sit within a contrasting high-density housing estate between the areas of Pensnett and Brierley Hill in the Black Country. Threats to the site exist in the form of social issues such as fly tipping, motorbikes, fires and residents using the site to graze their horses.

Most of the site is owned and managed by Dudley Metropolitan Borough Council, and has wardens present on site throughout the week. Management aims are to maintain and increase the size and health of the amphibian assemblage on the site by maintaining and enhancing habitat through a combination of new pond creation, connecting up of existing pond networks, eradication of non-native invasive species, and the monitoring of grazing and illegal activities across the 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 species for which this SAC has been designated.

Qualifying Species:

• S1166 Great crested newt Triturus cristatus

The great crested newt is the largest native British newt, reaching up to around 17cms in length. Newts require aquatic habitats for breeding. Eggs are laid singly on pond vegetation in spring, and larvae develop over summer to emerge in August – October, normally taking 2–4 years to reach maturity. Juveniles spend most time on land, and all terrestrial phases may range a considerable distance from breeding sites.

At designation, the water-bodies at this SAC consistently yielded high counts of great crested newts. The breeding ponds are surrounded by grassland and scrub slopes. The pond network has been extended by the creation of new ponds in January 2016. Rough, tussock-rich grassland and areas of scrub and trees offer valuable terrestrial habitat for enabling movement across the site and providing newts with hibernacula during the winter.

The great crested newt is also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended), making it a 'European Protected Species'. A <u>Licence</u> may therefore be required for any activities likely to harm or disturb great crested newts.

Table 1: Supplementary Advice for Qualifying Features: S1166 Great crested newt Triturus cristatus

Attributes		Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)
Supporting processes (on which the feature and/or its supporting habitat relies)	Conservation measures	Maintain the management measures (either within and/or outside the site boundary as appropriate) which are necessary to maintain the structure, functions and supporting processes associated with the Great Crested Newt feature and its supporting habitats.	 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 can be found within supporting documents such as the Natura 2000 Site Improvement Plan, site management strategies or plans, the Views about Management Statement for the underpinning SSSI and/or management agreements. The principal management measures on this site are: Maintain the extent and quality of pools and terrestrial habitat; through scrub management, monitoring and reporting of overgrazing, pond creation; Monitor amphibian assemblages and great crested newt populations every year. Monitor and control level of potentially harmful non-native invasive species. Prevent intentional and unintentional human damage through education and visitor management. 	Natural England's Views about the Management of the SSSI which underpin this SAC are available <u>here</u> NATURAL ENGLAND, 2014. Fens Pools SAC Site Improvement Plan (SIP086). Available at <u>http://publications.n</u> <u>aturalengland.org.u</u> <u>k/publication/63078</u> 25315741696
Supporting habitat: extent and distribution	Extent of supporting habitat	Maintain the total extent of the aquatic and terrestrial habitats which support Great Crested Newts, including freshwater ponds for breeding, and grasslands, scrub, deadwood and rocky habitat for hibernacula and connectivity.	In order to contribute towards the objective of achieving an overall favourable conservation status of the feature at a UK level, it is important to maintain or if appropriate restore the extent of supporting habitats and their range within this SAC. The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending on the nature, age and accuracy of data collection, and may be subject to periodic review in light of improvements in data. The site contains approximately 15ha of grassland, fen and scrub areas which can be used by newts when travelling between ponds or from hibernacula to breeding ponds. Scrub and tussocky grass areas can also be used as hibernacula for newts throughout winter. 13ha of the site is open water in the form of larger pools and smaller pool networks.	Fixed point photography from 1991 to 2007 available from Natural England
	Distribution of supporting habitat	Maintain and expand the distribution and continuity of the Great Crested Newt's supporting habitat,	A contraction in the range, or geographic spread, of the feature (and its component vegetation) 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.	Fixed point photography from 1991 to 2016 available from

Attributes		Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)
		including pond networks and associated transitional vegetation, across the site	Contraction may also reduce and break up the continuity of a habitat within a site and how well the species feature is able to occupy and use habitat within the site. Such fragmentation may 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 this feature and this may affect its viability. The most significant pond networks for great crested newts are identified through ongoing monitoring of populations; these need to be maintained and expanded on where possible. New ponds have been created in 2016 in order to achieve this.	Natural England HAYES, C.J. 2009. Habitat and Newt Assessment 2009 Report to Natural England.
Supporting processes (on which the feature and/or its supporting habitat relies)	Adaptation and resilience	Maintain the feature's ability, and that of its supporting habitat, to adapt or evolve to wider environmental change, either within or external to the site	This recognises the increasing likelihood of supporting 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 overall vulnerability of this SAC to climate change has been assessed by Natural England as being <i>low</i> , taking into account the sensitivity, fragmentation, topography and management of its supporting 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 required. 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.	Long term monitoring of great crested newt species and the non-native Alpine newt (Paul Wilkinson, Canal & River Trust – annual records available from Natural England) 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.n aturalengland.org.u

Attri	ributes Targets		Supporting and Explanatory Notes	Sources of site- based evidence (where available)
				k/publication/49545 94591375360].
Supporting habitat: structure/ function	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, within typical values for Great Crested Newt supporting habitat	Soil supports basic ecosystem function and is a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms. Soil biodiversity has a vital role to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with the supporting habitat of this Annex II feature.	
Supporting processes (on which the feature and/or its supporting habitat relies)	Water quantity/ quality	Maintain water quality and quantity to a standard which provides the necessary conditions to support the Great Crested Newt feature.	For many SAC features which are dependent on wetland habitats supported by surface and/or ground water, maintaining the quality and quantity of water supply will be critical, especially at certain times of year. Poor water quality and inadequate quantities of water can adversely affect the structure and function of this habitat type. Typically, meeting the surface water and groundwater environmental standards set out by the Water Framework Directive (WFD 2000/60/EC) will also be sufficient to support the achievement of SAC Conservation Objectives but in some cases more stringent standards may be needed to reflect the ecological needs of the species feature. Further site-specific investigations may be required to establish appropriate water quality standards for the SAC. The site is vulnerable to runoff that drains into it from the surrounding residential areas and industrial estate. There is known problem area, relating to discharges from ServoSteel Ltd into the inflow stream feeding Pond 11, which subsequently drains into Pond 26/25, then into shallow bay at the north east corner of Pond 01.Many of the ponds are naturally eutrophic and base-rich from the local clay geology. This attribute concerns point source, anthropogenic pollution resulting from discharges onto the site or dumping adjacent to ponds.	

Attri	butes	Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)
Supporting processes (on which the feature and/or its supporting habitat relies)	Air quality	Maintain concentrations and deposition of air pollutants at or below the site-relevant Critical Load or Level values given for Great Crested Newt supporting habitats on the Air Pollution Information System (www.apis.ac.uk).	The supporting habitat of this feature is considered sensitive to changes in air quality. Exceedance of critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition (including food-plants) and reducing supporting habitat quality and population viability of this feature. Critical Loads and Levels are recognised thresholds below which such harmful effects on sensitive UK habitats will not occur to a significant level, according to current levels of scientific understanding. There are critical levels for ammonia (NH3), oxides of nitrogen (NOx) and sulphur dioxide (SO2), and critical loads for nutrient nitrogen deposition and acid deposition. There are currently no critical loads or levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or Dusts. These should be considered as appropriate on a case-by-case basis. Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-natural habitats are still under development. 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.	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).
Supporting habitat: structure/ function	Overall Habitat Suitability Index score	Maintain an overall Great Crested Newt Habitat Suitability Index score of no less than 0.8.	The Habitat Suitability Index provides a measure of evaluating habitat quality and quantity for Great Crested Newts. The Index score lies between 0 and 1, with 1 representing optimal GCN habitat. In general, the higher the index score the more likely the site is to support great crested newts. The HSI methodology is documented in ARG-UK Advice Note 5 (May 2010). The HSI should not be used as a substitute for more detailed surveys and consideration of other attributes where necessary.	AMPHIBIAN AND REPTILE GROUPS OF THE UNITED KINGDOM ARG UK Advice Note 5 http://www.arguk.or g/info- advice/advice- notes/9-great- crested-newt- habitat-suitability- index-arg-advice- note-5/file
	Presence of ponds	Maintain the current series of ponds present within the site.	Ponds to include breeding ponds as well as non-breeding ponds, since the latter may be used for foraging or sustaining prey populations. The surface area of a pond is taken from when water reaches its highest level (excluding flooding events), which will usually be in the spring.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)
			Eleven ponds are present judging from the 1999 aerial photograph. Great Crested Newts are concentrated in the ponds at the northern end of the site. Additional ponds have been created since notification: over 20 now present, with an additional 5 present outside SAC boundary)	
Supporting habitat: structure /function	Permanence of ponds	Maintain a certain level of permanence of ponds across the site: levels should be high enough in late winter through to mid- summer to maintain breeding habitat but can drop considerably or dry out altogether to eliminate potential predatory fish populations from establishing.	 Ponds to include breeding ponds as well as non-breeding ponds, since the latter may be used for foraging or sustaining prey populations. Ponds should have some degree of permanence, drying out only occasionally in summer. This deters fish populations from establishing which can be detrimental to newt populations. Premature desiccation (before mid-July) is acceptable for all ponds in two out of three years provided highly successful recruitment in third year. Three consecutive years of desiccation with no recruitment should be considered unfavourable. Deep ponds are acceptable where there is no chance of colonisation by fish. Monitoring of habitat is made frequently by Dudley Council site managers. And works are carried out each year on different ponds to ensure a certain depth, extent and connectivity is maintained to the benefit of newt populations. 	Monitoring by Dudley Council and evidence gathered from annual monitoring. Records of fish presence and pond levels are held by CRT and DMBC.
	Cover of macrophytes	Maintain a high cover of macrohytes, typically between 50-80%, within ponds	 Marginal and emergent vegetation are important components of a great crested newt pond as they provide excellent egg-laying sites. Good plants for this purpose include water forget-me-not <i>Myosotis scorpioides</i>, flote/sweet grass <i>Glyceria fluitans</i> and great hairy willowherb <i>Epilobium hirsutum</i>. They are, however, an integral part of the natural successional change of a waterbody and whilst it is preferable to have a good range and area of marginal plants, they should not extend across the entire water surface. In most circumstances it will be desirable to retain a fringe of marginal and emergent vegetation around at least half of a pond's edge. Where the marginal vegetation is particularly invasive, and provides no specific benefit to crested newts, it may be decided that its complete removal is necessary. 	
	Supporting terrestrial habitat	Maintain the quality of terrestrial habitat likely to be utilised by Great Crested Newts, with no fragmentation of habitat by	Great crested newts need both aquatic and terrestrial habitat. Good quality terrestrial habitat, particularly within 500m of the breeding ponds, provides important sheltering, dispersing and foraging conditions and can include all semi-natural habitat along with meadows, rough tussock-rich grassland, scrub, woodland, as well as 'brownfield' land or low-intensity farmland.	

Attri	butes	Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)
		significant barriers to newt dispersal.	Good quality terrestrial habitat for great crested newts has structural diversity which can be provided by features such as hedges, ditches, stone walls, old farm buildings, loose stone/rocks, rabbit burrows and small mammal holes. Good habitat provides a range of invertebrates, such as earthworms, insects, spiders and slugs, on which newts are known to feed. Fragmentation refers to significant barriers to newt movement such as walls and buildings, but not footpaths or tracks. Newts disperse over land to forage for food, and move between ponds. The distances moved during dispersal vary widely according to habitat quality and availability. At most sites, the majority of adults probably stay within around 250m of the breeding pond but may well travel further if there are areas of high quality foraging and refuge habitat extending beyond this range.	
Supporting habitat: structure /function	Shading of ponds	Ensure pond perimeters are generally free of shade (typically no more than 60% cover of the shoreline)	Shading from trees and/or buildings (not including emergent pond vegetation) can negatively affect the abundance of marginal vegetation in ponds, water temperature and the rate of hatching and development of great crested newt eggs and larvae. Shading of southern margin is detrimental and some shading of northern margin is often beneficial. Monitoring of habitat is made frequently by Dudley Council site managers. And works are carried out each year on different ponds.	Monitoring by Dudley Council and comments during annual amphibian monitoring.
	Presence of fish and wildfowl	Ensure fish and wildfowl are absent in over 75% of newt ponds.	At high densities waterfowl (i.e. most water birds such as ducks, geese and swans but excluding moorhen) can remove all aquatic vegetation, adversely affect water quality and create turbid pond water conditions. Some may also actively hunt adult GCNs and their larvae. Similarly fish can be significant predators of newt larvae. The presence of waterfowl and fish can therefore reduce habitat suitability and should be wholly absent form sites which support fewer than 5 ponds.	Presence of fish in newt pools is recorded during annual newt surveys. (Records available from Natural England)
Supporting processes (on which the feature or its supporting habitat relies)	Water quality	Maintain the quality of pond waters within the SAC as indicated by the presence of an abundant and diverse invertebrate community.	As the clarity and chemical status of water bodies supporting great crested newts can be subjective, the presence of an abundant and diverse community of freshwater invertebrates can be indicative of suitable water quality standards. Invertebrate groups present should include groups such as mayfly larvae and water shrimps. This will ensure ponds support a healthy (mainly invertebrate) fauna to provide food for developing newt larvae and adults.	

Attr			Supporting and Explanatory Notes	Sources of site- based evidence (where available)
Population (of the feature)	Population abundance	Maintain the abundance of the great crested newt population at a level which consistently exceeds a minimum average peak count of 100 adults, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	This will ensure there is a viable population of the feature which is being maintained at or increased to a level that contributes as appropriate to its Favourable Conservation Status across its natural range in the UK. Due to the dynamic nature of population change, the target-value given for the population size or presence of this feature is considered to be the minimum standard for conservation/restoration measures to achieve. This minimum-value may be revised where there is evidence to show that a population's size or presence has significantly changed as a result of natural factors or management measures and has been stable at or above a new level over a considerable period. The values given here may also be updated in future to reflect any strategic objectives which may be set at a national level for this feature. Given the likely fluctuations in numbers over time, any impact-assessments should focus on the current size of the site's population, as derived from the latest known or estimated level established using the best available data. This advice accords with the obligation to avoid deterioration of the site or significant disturbance of the species for which the site is designated, and seeks to avoid plans or projects that may affect the site giving rise to the risk of deterioration. Similarly, where there is evidence to show that a feature has historically been more abundant than the stated minimum target and its current level, the ongoing capacity of the site to accommodate the feature at such higher levels in future should also be taken into account in any assessment. Unless otherwise stated, the population size or presence will be that measured using standard methods, such as peak mean counts or breeding surveys. This value is also provided recognising there will be inherent variability as a result of natural fluctuations and margins of error during data collection. Whilst we will endeavour to keep these values as up to date as possible, local Natural England staff can advise that the figures sta	CRT annual monitoring records (available from Natural England)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)
Population of the eature)	Population viability	Maintain the presence of great crested newt eggs in breeding ponds at a level which is likely to maintain the abundance of the population at or above its target level.	A "breeding pond" is defined as a pond in which egg-laying and successful metamorphosis (e.g. the pond doesn't dry up too soon) is likely to occur at least once every three years. The optimum time to survey for eggs is mid-March to mid- May. Presence of eggs can be recorded by day or night visits and surveys should be combined with visits for the adult component.	Eggs are searched for and recorded during CRT annual monitoring (records available from Natural England)
	Supporting meta- populations	Maintain the connectivity of the SAC's great crested newt population with its associated meta- populations (either within or outside of the site boundary)	Great crested newts often exist in meta-populations. A meta-population is a group of associated populations made up of newts which breed in, and live around, a cluster of ponds. There will be some interchange of newts between these populations, even though most adults consistently return to the same pond to breed, and so it will be important to avoid the isolation of these populations from each other. A meta-population associated with a SAC may occur <i>outside</i> of the designated site boundary. Near Fens Pools there is a small population of newts at Barrow Hill and Tansy Green SSSI, though it is not thought that the two populations interact. The connection between Fens Pools SAC and this site is currently limited as they are separated by a major A road, part of a residential estate and Russell's Hall hospital and car park. However, as the landscape in the area changes through development and potential modification of waterways – and possible new linkages to the three feeder canals to the site - the connectivity of the wider local landscape to the SAC may become more prevalent.	