



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

**Crookhill Brick Pit Special Area of Conservation (SAC)**  
**Site Code: UK0030349**



Crookhill Brick Pit Ponds 2013

**Date of Publication:** 21 March 2019

## **About this document**

This document provides Natural England's supplementary advice about the European Site Conservation Objectives relating to Crookhill Brick Pit SAC. This advice should therefore be read together with the SAC Conservation Objectives available [here](#).

**This advice replaces a draft version dated January 2019 following the receipt of comments from the site's stakeholders.**

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](mailto:HDIRConservationObjectivesNE@naturalengland.org.uk)**

## About this site

### European Site information

<b>Name of European Site</b>	Crookhill Brick Pit Special Area of Conservation
<b>Location</b>	Dorset
<b>Site Map</b>	The designated boundary of this site can be viewed <a href="#">here</a> on the MAGIC website
<b>Designation Date</b>	01 April 2005
<b>Qualifying Features</b>	See section below
<b>Designation Area</b>	4.71 hectares
<b>Designation Changes</b>	Not applicable
<b>Feature Condition Status</b>	Details of the feature condition assessments made at this site can be found using Natural England's <a href="#">Designated Sites System</a>
<b>Names of component Sites of Special Scientific Interest (SSSIs)</b>	Crookhill Brick Pit SSSI
<b>Relationship with other European or International Site designations</b>	None

### Site background and geography

Dorset is a county at the south-western edge of the range of great crested newts in England. Crookhill lies some 2 kilometres west of Weymouth and 0.5 kilometres north from the Fleet. The site is part of a former brick pit, the underlying Oxford clay has allowed the retention of water into ponds which in turn drain northwards under the B3157 into a further area of landscaped ponds which support a population of newts as part of a garden centre. The particular combination and juxtaposition of aquatic and terrestrial habitats at this site provides ideal breeding, foraging and hibernation conditions for great crested newt *Triturus cristatus*. The newts depend on water for breeding and particularly favour moderately deep, well-vegetated ponds without fish. The three water bodies on the site, which are largely rain-fed and of high water quality, provides extremely good conditions for newts. Reeds *Phragmites australis* dominate the aquatic vegetation of the pond margins and floating vegetation is mainly broad-leaved pondweed *Potamogeton natans*.

The terrestrial habitat consists of rough grassland, scrub and the remains of the former brickworks that provide valuable refugia for amphibians. The open grassland of the southern slopes is a mixture of false oat-grass *Arrhenatherum elatius*, red fescue *Festuca rubra* and Yorkshire fog *Holcus lanatus*, with herbs characteristic of calcareous clay soils such as colt's-foot *Tussilago farfara* and bristly ox-tongue *Picris echioides*. Other herbs scattered in this grassland include yellowwort *Blackstonia perfoliata*, creeping cinquefoil *Potentilla reptans*, birds-foot trefoil *Lotus corniculatus*, common knapweed *Centaureum erythraea* and grass vetchling *Lathyrus nissolia*. To the south of the clay pit a small remnant of old grassland has the local plants strawberry clover *Trifolium fragiferum* and pepper-saxifrage *Silaum silaus*. The scrub includes bramble *Rubus fruticosus*, elder *Sambucus niger*, hawthorn *Crataegus monogyna*, willow *Salix* spp. and common gorse *Ulex europaeus*. The habitats that occur around the ponds on this site are as important as the presence of suitable ponds.

Other supporting biodiversity on the site which indicate its value include populations of smooth newt *Triturus vulgaris*, palmate newt *T. helveticus*, grass snake *Natrix natrix*, slow worm *Anguis fragilis*, common lizard *Lacerta vivipara* and adder *Vipera berus*. Southern hawkmer *Aeshna cyanea* and scarce hawkmer dragonflies *Aeshna mixta* are also found on the site.

Crookhill Brick Pit provides some of the most notable geology in the area. The disused brickpit provides one of the best exposure of the Lower and Middle Oxford Clay in Southern England, showing a sequence through the Jason, coronatum and athlete zones, of Middle Jurassic age. There are considerable differences in zonal thickness and lithology between this section and the sections in the Midlands, with the grossourel subzone being greatly expanded at Crookhill. The Clays and shales seen here contain a rich fauna of ammonites, belemnites and bivalves, with the athlete zone fauna being particularly prolific and important. Reineckeid ammonites, usually rare in the British Callovian, occur fairly commonly in the athlete zone here. A key locality for British Callovian biostratigraphy.

The Oxford Clay of the Dorset Coast covers a small area completely separated from the main outcrop to the north by the overstepping Chalk of the Downs. Owing to its softness, natural outcrops are poor, but the Crook Hill and Putton Lane brick pits afford magnificent sections of several zones. They have long formed the principal sources of bricks and tiles in the area. Currently the cliff exposures are partially to completely obscured by vegetation. Vegetation build up is more prominent on the slumped faces and significant encroachment on the current exposures is undesirable.

Crookhill Brick Pit SAC is located in the [Weymouth Lowlands](#) National Character Area, its brownfield character is not typical of the mostly rural and low lying landscape, although clearly the former land use is appropriate close to a large built up area.

In the centre of the designated site is a county council waste transfer site which creates a number of risk factors.

The threats to the site arise from the encroachment of scrub both into open habitats but also into the ponds. The site is small and changes to the surrounding land use, if intensified or resulting in increased uses of agricultural fertilisers/herbicides or pesticides, could easily have a detrimental effect on newt foraging both within and when foraging around the site. The site is linked to a population to the north through a drainage link and valley feature. Little is known about the exchange of animals between the sites. The waste transfer station in the centre of the site brings a number of risk factors, night time lighting impacting on breeding, increased rats and predation due to poor control and operation of the site. The urban brownfield nature of the site brings additional risks from fish introduction (a fish trapping exercise has removed all fish although more recently sightings are noted). More recently concerns have been raised by a local surveyor about predation due to eels in the ponds.

From "Crookhill Brick Pit SSSI – Volume 1 Biological & Geological Details" – Temple, Phil (June 2005): Surveys of the main pond (crk): Summer 2005 – maximum count of 125 individuals. April 2000 – max count of 134 individuals.

Surveys of satellite ponds: Larger pond (cra): 2005 max = 0; 2004 max = 0; 2003 max = 5. Smaller pond (crb): 2005 max = 1; 2004 max = 3; 2003 max = 4.

Temple, P. (2006) recorded a maximum count for all three ponds of 285.

During the first two or three years of life before breeding starts, and then outside the spring breeding season, great crested newts are dependent on terrestrial habitats to provide foraging areas and places to hibernate. The terrestrial habitat consists of rough grassland, scrub and the remains of the former brickworks that provide valuable refuge for amphibians. The habitats that occur around the ponds on this site are as important as the presence of suitable ponds.

## 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:

None

### 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.

Crookhill Brickpit SSSI is a former brickpit with a Dorset Council facility in the middle. The site contains several ponds that support S1166 Great crested newts *Triturus cristatus*, including one pond which has been recorded to have some of the highest counts of the species in Dorset. The site also contains a variety of habitats used by the great crested newt in the terrestrial phase, including grassland, scrub and quarry spoil. The newer ponds were created as part of a mitigation project for the construction of a waste transfer station.

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 [licence](#) may therefore be required for any activities likely to harm or disturb great crested newts.

The location of the site in the south western edge of the species range, small size but high population count are particularly noteworthy in increasing the relative biodiversity importance of the site.

The SSSI also has important geological features (exposure of Lower and Middle Oxford Clay) for which it is notified.

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

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<b>Population (of the feature)</b>	<b>Population abundance</b>	Restore the abundance of the population to a level which is above the maximum count of 285, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	<p>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 (generally at least 10 years). 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.</p> <p>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.</p> <p>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</p>	Amphibian and Reptile Conservation Trust (ARCT) have information about the site as do the Dorset Environmental Records Centre (DERC).

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			possible, local Natural England staff can advise that the figures stated are the best available. Estimating the average size of the GCN population will normally be based on the peak count of adults undertaken in the known peak season for the area, and in-year weather conditions; likely to be Mid-April to Mid-May in central areas. The peak count is derived by summing the counts across the site on 'best' night for each season. Considerable natural between-year variation in population counts is frequent and has been noted on this site Despite a number of management actions in the past there are a number of risk factors such as pollution, predation and fish introduction which will be present in the long term.	
<b>Population (of the feature)</b>	<b>Population viability</b>	Restore the presence of great crested newt eggs in breeding ponds at/to a level which is likely to Restore 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. Breeding is recorded from all ponds, eDNA should be employed to confirm use in more turbid ponds.	
<b>Population (of the feature)</b>	<b>Supporting metapopulations</b>	Maintain the connectivity of the SAC population to any associated metapopulations (either within or outside of the site boundary)	Great crested newts often exist in metapopulations. A metapopulation 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 metapopulation associated with a SAC may occur outside of the designated site boundary. The connectivity of the wider local landscape to the SAC may therefore be important as this may help to ensure the survival of the overall population even if sub-populations are temporarily affected by, for example, pond desiccation or fish introductions.  The site is part of a wider recorded population with suitable habitats and breeding features known from the water gardens to the north and beyond and from ponds on the MoD bridging	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			camp to the south.	
<b>Supporting habitat: extent and distribution</b>	<b>Distribution of supporting habitat</b>	Restore the distribution and continuity of the feature and its supporting habitat, including where applicable its component vegetation types and associated transitional vegetation types, across the site because the site has not been managed and scrub encroachment has reduced open habitats.	<p>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. 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.</p> <p>The site is small and all areas are within the distance GCNs are expected to cover, the main supporting habitats which should be restored to their former extent are the rough grassland/open habitats and extent of ponds with as high a HSI as can be attained.</p>	Historic aerial photographs and SSSI habitat survey. Available on request from Natural England
<b>Supporting habitat: extent and distribution</b>	<b>Extent of supporting habitat</b>	Restore the total extent of the habitat(s) which support the feature to: rough grassland 2.3ha, open water ponds 0.31 hectares scrub 1.6 hectares.	<p>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.</p> <p>Cutting back areas of scrub and the creation of habitat piles will have two beneficial effects, providing for open grassland as well as new foraging/sheltering features. Scraping out existing ponds or creation of new features should be explored (a pragmatic approach to siting new ponds will be needed).</p>	Historic air photography held with the Natural England local team as well as using air photography on Google Earth to monitor gross changes. OS mapping may also pick out increased ponds and other infrastructure.
<b>Supporting habitat: structure/function</b>	<b>Cover of macrophytes</b>	Restore a high cover of macrophytes, 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,	



Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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. Pond encroachment by reeds and shading by scrub is reducing aquatic macrophyte cover by reducing the extent and quality of the transitional fringes of the ponds.</p>	
<b>Supporting habitat: structure/function</b>	<b>Overall Habitat Suitability Index score</b>	For this SAC, Restore an overall Great Crested Newt Habitat Suitability Index score of no less than 0.8.	<p>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.</p> <p>The HSI score for the site overall is 0.76 in Feb 2013 with a score of 0.6 for the ponds, this is indicative of the need for restoration works as these are already below 0.8. Any pond falling below HIS of 0.5 will be failing to meet the necessary standard. This is because of the low number of ponds which make the site particularly vulnerable.</p>	<p>Further information and advice can be sought from local Amphibian and Reptile Conservation Trust</p> <p>Amphibian and reptile groups of the united kingdom ARG-UK Advice Note 5 <a href="http://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/file">http://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/file</a></p>
<b>Supporting habitat: structure/function</b>	<b>Permanence of ponds</b>	Restore the permanence of water within ponds present within the site	<p>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 a high degree of permanence (they never or rarely dry out other than through natural drought) and this may be adversely affected by changes in the supply or flow of water (from either surface water and/or groundwater sources] to the ponds.</p> <p>It is apparent that the encroachment of reeds and scrub is a successional process through which the ponds are being dried out and particularly smaller and shallower ponds are likely to be most at risk.</p>	Aerial photography and any ground photographs held on file by Natural England and may be available on request.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<b>Supporting habitat: structure/function</b>	<b>Presence of fish and wildfowl</b>	Ensure fish and wildfowl are absent in all 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 pondwater conditions. Some may also actively hunt adult GCNs and their larvae. Similarly fish can be significant predators of GCN larvae. The presence of waterfowl and fish can reduce habitat suitability. These should be wholly absent from sites which support fewer than 5 ponds. Fish were removed from the site during the waste transfer station application c. 2001-2003.	
<b>Supporting habitat: structure/function</b>	<b>Presence of ponds</b>	Restore the number or surface area of ponds present within the site to 0.31 hectares with a suitable HIS of over 0.6 for all ponds. No single pond to fall below 0.4.	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.	
<b>Supporting habitat: structure/function</b>	<b>Shading of ponds</b>	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. This is one of the more time critical problems on the site.	
<b>Supporting habitat: structure/function</b>	<b>Soils, substrate and nutrient cycling</b>	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 the 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.	
<b>Supporting habitat: structure/function</b>	<b>Supporting terrestrial habitat</b>	Restore the quality of terrestrial habitat likely to be utilised by Great Crested Newts, with no fragmentation of habitat by significant barriers to newt dispersal.	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 tussocky grassland, scrub, woodland, as well as 'brownfield' land or low-intensity farmland. Good quality terrestrial habitat for great crested newts has	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>structural diversity which can be provided by features such as hedges, ditches, rabbit burrows and small mammal holes. Good habitat provides a range of invertebrates, such as earthworms, insects, spiders and slugs, on which great crested newts are known to feed. Fragmentation refers to significant barriers to great crested 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.</p> <p>The site was a former brick pit/works and so its brownfield heritage is likely to have left a number of built features/ structures as well as heaps of materials which are overgrown, these are important features for hibernation and foraging. The succession of open habitats does result in a significant loss in foraging habitat and invertebrate prey. The nature of the site is such that a robust scraping back of areas which are invaded should establish early successional open habitats which will be important for the animals. The scraped material similarly would be valuable as refugia/hibernating sites.</p>	
<b>Supporting processes (on which the feature and/or its supporting habitat relies)</b>	<b>Adaptation and resilience</b>	Restore 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, because the extent of supporting habitats are reduced and ponds encroached by scrub acts to reduce resilience of the features.	<p>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.</p> <p>This recognises the increasing likelihood of supporting habitat features to absorb or adapt to wider environmental changes.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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.</p> <p>Maintaining a suitable balance of open habitats and scrub will be important to enabling the GCNs to survive. In the future some consideration will need to be given to deepening ponds to increase their volume to surface area ratio so making them more resistant to drying out.</p>	
<b>Supporting processes (on which the feature and/or its supporting habitat relies)</b>	<b>Air quality</b>	Maintain or, where necessary, restore 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 ( <a href="http://www.apis.ac.uk">www.apis.ac.uk</a> ).	<p>The supporting habitat of this feature 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 (including food-plants) and reducing supporting habitat quality and population viability of this feature.</p> <p>Critical Loads and Levels are recognised thresholds below which such harmful effects on sensitive UK habitats will not occur to a significant level, according to current levels of scientific understanding. There are critical levels for ammonia (NH<sub>3</sub>), oxides of nitrogen (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>), 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.</p> <p>Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-</p>	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 ( <a href="http://www.apis.ac.uk">www.apis.ac.uk</a> ).

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			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.	
<b>Supporting processes (on which the feature and/or its supporting habitat relies)</b>	<b>Conservation measures</b>	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 and/or its supporting habitats.	<p>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.</p> <p>The principal management measures on this site are:</p> <ul style="list-style-type: none"> <li>• Restore the extent, diversity and quality of pools and terrestrial habitat; through scrub management, monitoring and avoiding changes in the operation of the waste transfer station and as appropriate pond creation;</li> <li>• Monitor great crested newt populations (adults and eggs) every year.</li> <li>• Monitor and control level of potentially harmful non-native invasive species e.g. plants and fish.</li> <li>• Prevent intentional and unintentional human damage through education and close liaison and communication with the owners and adjacent site managers.</li> </ul> <p>While managing scrub levels beneficial for Great Crested Newts, it is also important to ensure that excess scrub and vegetation cover is not detrimental to the geological feature that this site's underpinning SSSI is also designated for.</p>	<p>Natural England's Views about the Management of the SSSI which underpin this SAC are available from:  <a href="https://designatedsites.naturalengland.org.uk/PDFsForWeb/VAM/1003402.pdf">https://designatedsites.naturalengland.org.uk/PDFsForWeb/VAM/1003402.pdf</a></p> <p>NATURAL ENGLAND, 2015. Crookhill Brick Pit SAC Site Improvement Plan (SIP050) available from:  <a href="http://publications.naturalengland.org.uk/publication/6640766080253952">http://publications.naturalengland.org.uk/publication/6640766080253952</a></p> <p>Amphibian and Reptile Conservation Trust (ARCT) have information about the site as do the Dorset Environmental Records Centre (DERC).</p> <p>The hard copy survey data relating to SSSI selection will be held on the site file and may be available from Natural England on request</p>
<b>Supporting processes (on which the feature and/or its</b>	<b>Water quantity/ quality</b>	Maintain water quality and quantity to a standard which provides the necessary conditions to support the 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	Previous surveys by P Temple (available on request) have commented on the turbidity of the ponds in relation to survey methodology and the possible re-

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
supporting habitat relies)			<p>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.</p> <p>The site is vulnerable to low quality surface water runoff from the adjacent farmland as well as from the waste transfer station, particularly as it's a pit. The site is however predominantly rainwater fed as far as is known. The clay substrates underlying are likely to result in turbid conditions with minimal levels of disturbance from fish, water birds or dogs.</p>	introduction of fish more recently.
Supporting processes (on which the feature or its supporting habitat relies)	Water quality	Maintain the quality of pondwaters within the site as indicated by the presence of an abundant and diverse invertebrate community.	As the clarity and chemical status of water bodies supporting GCNs 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 GCN larvae and adults. As a former clay pit some of the ponds are very turbid either naturally or through the activity of fish/eels or dogs in the pond.	
<p><b>Version Control</b>            Advice last updated: <b>12<sup>th</sup> February 2019</b>. Following stakeholder comments - supporting and explanatory notes section expanded for <b>Conservation Measures</b> attribute to include manage of scrub in light of Great Crested Newt and the Geological Features of the underpinning SSSI.</p>				
<p><b>Variations from national feature-framework of integrity-guidance:</b> N/A</p>				