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LAND SOUTH OF
FUNTLEY ROAD
FUNTLEY

**Proof of Evidence in
respect of Ecology and
Nature Conservation**

PLANS AND APPENDICES

by
**KARL DAVID GOODBUN
BSc (Hons), MCIEM**

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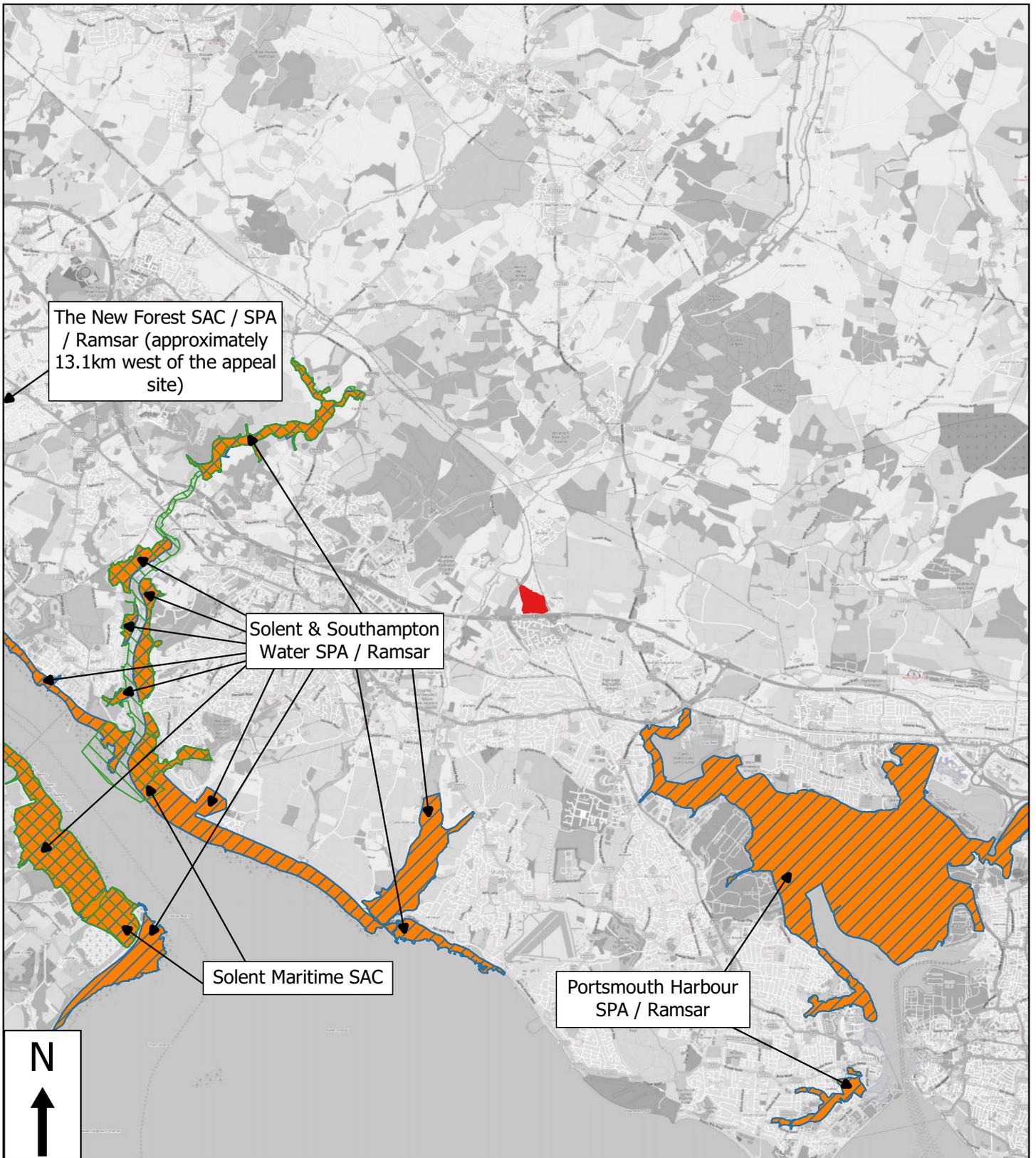
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PLAN ECO1

Relevant Designated Site Locations



Key:

- Appeal Site Boundary
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar Site



ECOLOGY SOLUTIONS
Part of the ES Group

Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
ecologysolutions.co.uk

7601 : FUNTLEY SOUTH

PLAN ECO1: RELEVANT DESIGNATED
SITE LOCATIONS

APPENDICES

APPENDIX 1

sHRA produced by Ecology Solutions (December
2021)

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LAND SOUTH OF
FUNTLEY ROAD
FUNTLEY

**SHADOW
HABITATS REGULATIONS
ASSESSMENT**

**Pursuant to Regulation 63
of The Conservation of
Habitats and Species
Regulations 2017
(as amended)**

December 2021
7601.sHRA.vf1

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1. INTRODUCTION

1.1. Background

- 1.1.1. This Shadow Habitats Regulations Assessment (sHRA) report has been prepared by Ecology Solutions, in order to assist the Competent Authority (in this case the Planning Inspector appointed on behalf of the Secretary of State) when applying the legal tests associated with The Conservation of Habitats and Species Regulations 2017 (as amended) (hereinafter, “the Habitats Regulations”). This sHRA provides sufficient information for the Competent Authority to assess the implications of the Appeal Proposals on designated sites of nature conservation importance protected under the Habitats Regulations, and sites that are given the same protection in accordance with advice in the National Planning Policy Framework (NPPF¹).

1.2. Appeal Site Characteristics

- 1.2.1. The Appeal Site broadly comprises semi-improved grassland, woodland and hardstanding / made ground, with small parcels of ruderal vegetation and scrub also present. Hedgerows and tree lines are present, predominantly located at the boundaries. The majority of the grassland is short grazed, forming a number of paddocks used by horses.
- 1.2.2. Funtley Road borders the Appeal Site to the north. Woodland habitat borders the Appeal Site to the east (with the Eastleigh to Fareham railway line beyond) and the south (with the M27 beyond). Woodland and open fields are located beyond the western boundary.

1.3. Appeal Proposals

- 1.3.1. Outline planning permission is sought to provide up to 125 one, two, three and four-bedroom dwellings including 6 Self/Custom build plots, Community Building or Local Shop (Use Class E & F.2) with associated infrastructure, new community park, landscaping and access.

1.4. Purpose of this Report

- 1.4.1. This report specifically assesses the potential significant effects of the Appeal Proposals on international / European designated sites (now commonly referred to as Habitats Sites). Within this document specific regard is had to the tests under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended). Regulation 63 is described and considered further at Annex 1 this document, with additional information relevant to the application of the legal tests and associated guidance included at Annex 2.
- 1.4.2. Assessment under Regulation 63 of the Habitats Regulations is required in this instance, since the Appeal Site lies in relatively close proximity to a number of European / internationally designated sites.

¹ Paragraph 181 of the NPPF (2021)

The following are considered to be relevant designated sites for the purpose of this assessment:

- Portsmouth Harbour Special Protection Area (SPA);
- Portsmouth Harbour Ramsar site;
- Solent and Southampton Water SPA;
- Solent and Southampton Water Ramsar site;
- Solent Maritime Special Area of Conservation (SAC);
- New Forest SPA;
- New Forest SAC; and
- New Forest Ramsar site.

1.4.3. It should be noted that the screening for relevant designated sites has been undertaken with full regard had to the development plan and information published by Natural England. The proximity of the Appeal Site to these designated / classified sites is described in detail at Section 2 of this sHRA.

1.4.4. As part of this assessment, professional judgement has necessarily been applied in some instances in order to interpret information.

1.4.5. In line with relevant jurisprudence, this report assesses the likely significant effects of the development proposals as a whole, both alone and in combination with other plans / projects. It then goes on to consider whether the development proposals will give rise to an adverse effect on the integrity of the relevant designated sites.

1.4.6. By way of headline summary, it is the opinion of Ecology Solutions, following detailed assessment, that the development proposals would not result in an adverse effect on the integrity of any international / European designated sites, either alone or in combination with any other plans or projects, and that as such the test contained at Regulation 63 of the Habitats Regulations would be passed.

2. LOCATION OF THE APPEAL SITE IN RELATION TO RELEVANT DESIGNATED SITES

2.1. All of the relevant European / International designated sites are listed below together with the distance from the Appeal Site:

- Portsmouth Harbour Special Protection Area (SPA), (approximately 2.8km km south of Appeal Site);
- Portsmouth Harbour Ramsar site (approximately 2.8km km south of Appeal Site);
- Solent and Southampton Water SPA (approximately 3.6km south of the Appeal Site);
- Solent and Southampton Water Ramsar site (approximately 3.6km south of the Appeal Site);
- Solent Maritime SAC (approximately 3.6km south of the Appeal Site);
- New Forest SPA (approximately 13.1km west of the Appeal Site);
- New Forest SAC (approximately 13.1km west of the Appeal Site);
and
- New Forest Ramsar site (approximately 13.1 km west of the Appeal Site).

2.2. In part, the Solent & Southampton Water SPA overlaps with the Solent Maritime SAC. Additionally, the Solent and Southampton Water SPA / Ramsar, Portsmouth Harbour SPA / Ramsar and the Solent Maritime SAC are further classified as a European Marine Site (EMS). EMSs are defined as any part of a European site covered (either continuously or intermittently) by tidal waters or any part of the sea. They include SPAs, SACs and Ramsar sites. In many instances these designations coincide.

2.3. The relationship between the Appeal Site and relevant designated sites is shown on Plan ECO1 and at Annex 3.

3. CONSERVATION STATUS OF RELEVANT DESIGNATED SITES

- 3.1. This section of the sHRA describes the reasons for designation of the international / European designated sites, together with supporting information and the Conservation Objectives (noting that these are not produced for Ramsar sites).

Portsmouth Harbour SPA

Qualifying interest

- 3.2. Portsmouth Harbour itself is a large, industrialised estuary, considered to be one of the most important sheltered intertidal areas on the south coast of England. It has been classified as an SPA on the basis of internationally and nationally important populations of birds being present.
- 3.3. This SPA comprises extensive intertidal mudflats, sandflats with seagrass beds, coastal lagoons, saltmarsh, shallow coastal waters and coastal grazing marsh.
- 3.4. At low tide the extensive mudflats are exposed and these support rich populations of invertebrates, which are recognised as an important food source for overwintering birds.
- 3.5. The SPA qualifies under Article 4.2 of the Bird directive by supporting populations of European importance of the following migratory / wintering species:
- Black-tailed Godwit *Limosa limosa islandica*;
 - Dark-bellied Brent Goose, *Branta bernicla bernicla*;
 - Dunlin *Calidris alpina*;
 - Red-breasted Merganser *Mergus serrator*.
- 3.6. The Natura 2000 Standard Data Form and citation for the SPA are included in Annex 4.

Conservation Objectives

- 3.7. The formal Conservation Objectives for the SPA (21st February 2019) are defined by Natural England as follows:

“With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the ‘Qualifying Features’ listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- *The extent and distribution of the habitats of the qualifying features*
- *The structure and function of the habitats of the qualifying features*

- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site.*

This document should be read in conjunction with the accompanying Supplementary Advice document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

- *A046a Branta bernicla bernicla; Dark-bellied brent goose (Non-breeding)*
- *A069 Mergus serrator; Red-breasted merganser (Non-breeding)*
- *A149 Calidris alpina alpina; Dunlin (Non-breeding)*
- *A156 Limosa limosa islandica; Black-tailed godwit (Non-breeding)."*

- 3.8. A copy of the formal Conservation Objectives (along with Supplementary Advice where available) is included at Annex 4.

Portsmouth Harbour Ramsar site

- 3.9. Portsmouth Harbour qualifies as a Ramsar site under Criteria 3 and 6 of the Ramsar Convention as set out on the Ramsar Information Sheet.
- 3.10. The site qualifies under Criterion 3 on account of its intertidal mudflats which comprise extensive beds of eelgrass *Zostera angustifolia* and *Zostera noltei* which support the grazing Dark-bellied Brent Geese populations. A mud-snail *Hydrobia ulvae* is found in very high densities and this helps to support the wading birds at the site. Extensive areas comprise Common cord-grass *Spartina anglica*, green algae *Enteromorpha spp.* and Sea Lettuce *Ulva lactuca*. In areas, Sea Purslane *Halimione portulacoides* is frequent and this gradates to more varied communities at the upper shore levels. A number of saline lagoons are also present, hosting nationally important species.
- 3.11. It qualifies under Criterion 6 as it supports an internationally important population of Dark-bellied Brent Goose (2105 individuals, representing an average of 2.1% of the GB population - 5 year peak mean 1998/9-2002/3 as cited on the Ramsar Information Sheet).
- 3.12. A copy of the Ramsar Information Sheet is included at Annex 4.

Solent and Southampton Water SPA

Qualifying interest

- 3.13. The Solent and Southampton Water SPA covers an extensive area of coastal wetland sites, comprising a series of estuaries and harbours with extensive mudflats and saltmarshes together with adjacent coastal habitats

including saline lagoons, shingle beaches, reedbeds, damp woodland and grazing marsh.

3.14. The SPA qualifies under Article 4.1 of the Birds Directive by supporting populations of European importance of the following breeding species listed on Annex 1 of the Bird Directive:

- Common Tern *Sterna hirundo*;
- Little Tern *Sterna albifrons*;
- Roseate Tern *Sterna dougallii*;
- Sandwich Tern *Sterna sandvicensis*; and
- Mediterranean Gull *Larus melanocephalus*.

3.15. The SPA also qualifies under Article 4.2 of the Bird directive by supporting populations of European importance of the following migratory / wintering species:

- Black-tailed Godwit;
- Dark-bellied Brent Goose;
- Ringed Plover *Charadrius hiaticula*;
- Teal *Anas crecca*.

3.16. The site also qualifies under Article 4.2 on account of its wintering assemblage of waterfowl of European importance.

3.17. The Natura 2000 Standard Data Form and citation for the SPA are included in Annex 5.

Conservation Objectives

3.18. The formal Conservation Objectives for the SPA (21st February 2019) are defined by Natural England as follows:

“With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the ‘Qualifying Features’ listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- *The extent and distribution of the habitats of the qualifying features*
- *The structure and function of the habitats of the qualifying features*
- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site.*

This document should be read in conjunction with the accompanying Supplementary Advice document, which provides more detailed

advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

- *A046a Branta bernicla bernicla; Dark-bellied brent goose (Non-breeding)*
- *A052 Anas crecca; Eurasian teal (Non-breeding)*
- *A137 Charadrius hiaticula; Ringed plover (Non-breeding)*
- *A156 Limosa limosa islandica; Black-tailed godwit (Non-breeding)*
- *A176 Larus melanocephalus; Mediterranean gull (Breeding)*
- *A191 Sterna sandvicensis; Sandwich tern (Breeding)*
- *A192 Sterna dougallii; Roseate tern (Breeding)*
- *A193 Sterna hirundo; Common tern (Breeding)*
- *A195 Sterna albifrons; Little tern (Breeding)*
- *Waterbird assemblage”*

- 3.19. A copy of the formal Conservation Objectives (along with Supplementary Advice where available) is included at Annex 5.

Solent and Southampton Water Ramsar site

- 3.20. The Solent and Southampton Water qualifies as a Ramsar site under Criteria 1, 2, 5 and 6 of the Ramsar Convention as set out on the Ramsar Information Sheet.
- 3.21. The site qualifies under Criterion 1 on account of it being one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide, and as it includes many wetland habitats characteristic of the biogeographic region.
- 3.22. It qualifies under Criterion 2 on account of it supporting an important assemblage of rare plants and invertebrates, including at least 33 Red Data Book (RDB) invertebrates and at least eight RDB plants.
- 3.23. The site qualifies under Criterion 5 as it supports a wildfowl assemblage of international importance, with peak winter counts of 5,1343 wildfowl (5 year peak mean, 1998/99-2002/3, as specified in the Ramsar Information Sheet).
- 3.24. Furthermore the site qualifies under Criterion 6 as it supports species/populations occurring at levels of international importance of Ringed Plover, Dark-bellied Brent Goose, Teal and Black-tailed Godwit.
- 3.25. A copy of the Ramsar Information Sheet is included at Annex 5.

Solent Maritime SAC

Qualifying interest

- 3.26. The Solent Maritime SAC is designated on account of the presence of the following habitats listed on Annex I of the Habitats Directive as primary reasons for selection:
- Estuaries;
 - Spartina swards (*Spartinion maritimae*); and
 - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*).
- 3.27. Other Annex I habitats are also present as a qualifying feature, but not as a primary reason for the selection of the site, specifically:
- Sandbanks which are slightly covered by sea water all the time;
 - Mudflats and sandflats not covered by seawater at low tide;
 - Coastal lagoons;
 - Annual vegetation of drift lines;
 - Perennial vegetation of stony banks;
 - Salicornia and other annuals colonising mud and sand; and
 - Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes').
- 3.28. Whilst the Solent Maritime SAC is not designated on account of the presence of any Annex II species as a primary reason for selection of the site, the Annex II species Desmoulin's Whorl Snail *Vertigo moulinsiana* is present as a qualifying feature but is not a primary reason for site selection.
- 3.29. Where features are listed as a qualifying feature but not a primary reason for site selection, it is still necessary to consider them as interest features for the purpose of undertaking an HRA.
- 3.30. The Natura 2000 Standard Data Form and citation for the SAC are included in Annex 6.

Conservation Objectives

- 3.31. The formal Conservation Objectives for the SAC (27st November 2018) are defined by Natural England as follows:

"With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- *The extent and distribution of qualifying natural habitats and habitats of qualifying species*

- *The structure and function (including typical species) of qualifying natural habitats*
- *The structure and function of the habitats of qualifying species*
- *The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely*
- *The populations of qualifying species, and,*
- *The distribution of qualifying species within the site.*

This document should be read in conjunction with the accompanying Supplementary Advice document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

- *H1110. Sandbanks which are slightly covered by sea water all the time*
- *H1130. Estuaries*
- *H1140. Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats*
- *H1150. Coastal lagoons**
- *H1210. Annual vegetation of drift lines*
- *H1220. Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves*
- *H1310. Salicornia and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand*
- *H1320. Spartina swards (*Spartinion maritimae*); Cord-grass swards*
- *H1330. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)*
- *H2120. Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram*
- *S1016. *Vertigo moulinsiana*; *Desmoulin's whorl snail*.*

- 3.32. A copy of the formal Conservation Objectives (along with Supplementary Advice where available) is included at Annex 6.

New Forest SPA

Qualifying interest

- 3.33. The SPA qualifies under Article 4.1 of the Birds Directive by supporting populations of European importance of the following breeding species listed on Annex 1 of the Bird Directive:

- Nightjar *Caprimulgus europaeus*;
- Woodlark *Lullula arborea*;
- Honey Buzzard *Pernis apivorus*; and
- Dartford Warbler *Sylvia undata*.

- 3.34. It further qualifies under Article 4.1 on account of supporting wintering populations of European importance of Hen Harrier *Circus cyaneus*.

3.35. The SPA qualifies under Article 4.2 of the Birds Directive by supporting populations of European importance of:

- Hobby *Falco Subbuteo*; and
- Wood Warbler *Phylloscopus sibilatrix*.

3.36. The Natura 2000 Standard Data Form and citation for the SPA are included in Annex 7.

Conservation Objectives

3.37. The formal Conservation Objectives for the SPA (21st February 2019) are defined by Natural England as follows:

“With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the ‘Qualifying Features’ listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- *The extent and distribution of the habitats of the qualifying features*
- *The structure and function of the habitats of the qualifying features*
- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site.*

This document should be read in conjunction with the accompanying Supplementary Advice document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

- *A072 Pernis apivorus; European honey-buzzard (Breeding)*
- *A082 Circus cyaneus; Hen harrier (Non-breeding)*
- *A099 Falco subbuteo; Eurasian hobby (Breeding)*
- *A224 Caprimulgus europaeus; European nightjar (Breeding)*
- *A246 Lullula arborea; Woodlark (Breeding)*
- *A302 Sylvia undata; Dartford warbler (Breeding)*
- *A314 Phylloscopus sibilatrix; Wood warbler (Breeding).”*

3.38. A copy of the formal Conservation Objectives (along with Supplementary Advice where available) is included at Annex 7.

New Forest SAC

Qualifying interest

3.39. The New Forest SAC is designated on account of the presence of the following habitats listed on Annex I of the Habitats Directive as primary reasons for selection:

- Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*);
- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*;
- Northern Atlantic wet heaths with *Erica tetralix*;
- European dry heaths;
- *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*);
- Depressions on peat substrates of the *Rhynchosporion*;
- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrub layer (*Quercion robori-petraeae* or *Ilici-Fagenion*);
- *Asperulo-Fagetum* beech forests;
- Old acidophilous oak woods with *Quercus robur* on sandy plains;
- Bog woodland; and
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*).

3.40. Annex I habitats listed present as a qualifying feature, but not a primary reason for selection of this site are as follows:

- Transition mires and quaking bogs; and
- Alkaline fens.

3.41. Annex II species that are listed as a primary reason for selection of this site are:

- Southern damselfly *Coenagrion mercurial*; and
- Stag beetle *Lucanus cervus*.

3.42. The Annex II species Great Crested Newt *Triturus cristatus* is listed as present as a qualifying feature, but not a primary reason for site selection. The Natura 2000 Standard Data Form and citation for the SAC are included in Annex 7

Conservation Objectives

3.43. The formal Conservation Objectives for the SAC (27th November 2018) are defined by Natural England as follows:

“With regard to the SAC and the natural habitats and/or species for which the site has been designated (the ‘Qualifying Features’ listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- *The extent and distribution of qualifying natural habitats and habitats of qualifying species*
- *The structure and function (including typical species) of qualifying natural habitats*
- *The structure and function of the habitats of qualifying species*
- *The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely*
- *The populations of qualifying species, and,*
- *The distribution of qualifying species within the site.*

This document should be read in conjunction with the accompanying Supplementary Advice document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

- *H3110. Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae); Nutrient-poor shallow waters with aquatic vegetation on sandy plains*
- *H3130. Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea; Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels*
- *H4010. Northern Atlantic wet heaths with Erica tetralix; Wet heathland with cross-leaved heath*
- *H4030. European dry heaths*
- *H6410. Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae); Purple moor-grass meadows*
- *H7140. Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface*
- *H7150. Depressions on peat substrates of the Rhynchosporion*
- *H7230. Alkaline fens; Calcium-rich springwater-fed fens*
- *H9120. Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion); Beech forests on acid soils*
- *H9130. Asperulo-Fagetum beech forests; Beech forests on neutral to rich soils*
- *H9190. Old acidophilous oak woods with Quercus robur on sandy plains*
- *H91D0. Bog woodland**
- *H91E0. Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae); Alder woodland on floodplains**
- *S1044. Coenagrion mercuriale; Southern damselfly*
- *S1083. Lucanus cervus; Stag beetle*
- *S1166. Triturus cristatus; Great crested newt.”*

- 3.44. A copy of the formal Conservation Objectives (along with Supplementary Advice where available) is included at Annex 7.

New Forest Ramsar Site

- 3.45. The New Forest qualifies as a Ramsar site under Criteria 1, 2, and 3 of the Ramsar Convention as set out on the Ramsar Information Sheet (see Annex 7).
- 3.46. The site qualifies under Ramsar criterion 1 on account of its valley mires and wet heaths which are of outstanding scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. It holds the largest concentration of intact valley mires of this type in Britain.
- 3.47. The site qualifies under Ramsar criterion 2 as it supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plants are found in addition to at least 65 red data book invertebrate species.
- 3.48. The site qualifies under Ramsar criterion 3 on account of the mire habitats being of high ecological quality and diversity with undisturbed transition zones. The rich invertebrate fauna includes a high concentration of rare and scarce wetland species. The overall habitat complex, is considered essential to the genetic and ecological diversity of southern England.

4. ASSESSMENT OF THE IMPLICATIONS OF THE PROPOSALS FOR THE CONSERVATION OBJECTIVES OF THE RELEVANT DESIGNATED SITES

- 4.1. Annex 1 of this document sets out the legislation, guidance and case law of relevance to an assessment of the implications of a plan / project on a European site. Annex 2 discusses key terms and themes associated with Habitats Regulations assessments. For the avoidance of doubt, the Development Proposals are not directly connected with or necessary to the management of any relevant designated site.
- 4.2. Having regard to the legislative tests and supporting guidance, this sHRA has adopted a two-stage process, the first being the 'likely significant effect' stage, and the second being the 'integrity test'.
- 4.3. It is clear from guidance that the Conservation Objectives of a European site are the most important consideration in determining whether the plan / project will have an adverse effect on the site, including any effects on its integrity.
- 4.4. It is evident that there is a clear hierarchical approach to assessing effects on European sites in line with the Habitats Regulations. The primary test is that against the Conservation Objectives with other considerations following these. Such other considerations would include:
 - Other features of interest associated with the site; and
 - Other relevant baseline information for the site.
- 4.5. In line with the above, whilst the qualifying interest features of the site and other baseline information have informed this assessment, the greatest weight has been placed upon the formal Conservation Objectives for the European sites, as set out by Natural England. Consideration has also been afforded to additional information where available, such as that produced by Natural England.
- 4.6. With reference to the relevant designated sites, this section includes a description of the potentially significant effects arising from the plan / project. The potential effects are assessed within this section in order to address the test under Regulation 63 (1) in the first instance (the 'likely significant effect' stage).
- 4.7. In undertaking this assessment, consideration has been had to the best available scientific knowledge. Further consideration under the Habitats Regulations can therefore be undertaken consistent with the HRA Guidance 2021 (and Waddenzee judgment). That requires the use of the best scientific knowledge to inform a decision, where no reasonable scientific doubt remains as to the presence and / or absence of effects that would adversely affect the integrity of the designated site (see Annex 1).
- 4.8. Furthermore, consideration is given to the People over Wind Judgement (C-323/17), which confirmed the view of the CJEU that avoidance or mitigation measures can only be taken into consideration at the Appropriate Assessment (integrity test) stage.

Potential significant effects in the absence of mitigation

- 4.9. The formal Conservation Objectives and the qualifying interest features of the relevant designated sites are described in detail within Section 3 of this assessment. Section 2 describes the location of the Appeal Site in the context of the various designations.
- 4.10. Having regard to the formal Conservation Objectives and qualifying interest features for each designated site, and also the nature of the Appeal Proposals and the distances involved, specific consideration has been given to the following pathways for likely significant effects to arise on the designated sites:
1. Effects from traffic related air quality;
 2. Effects relating to nutrient nitrogen; and
 3. Effects from increased recreational pressure.
- 4.11. For clarity, the habitats present at the Appeal Site do not constitute supporting habitat for any of the qualifying species populations associated with the relevant designated sites. No functional linkage has been identified and as such no further consideration of this issue is given.
- 4.12. Regarding air quality issues, regard has been had to the "Air Quality Habitat Regulations Assessment for the Fareham Borough Local Plan 2021 - 2037", produced by Ricardo Energy and Environment. For all designated sites assessed, in relation to Nitrogen and acid deposition, airborne NO_x and NH₃, the assessment report for the Local Plan (2021 - 2037) concludes that adverse effects (on site integrity) can be discounted, with no mitigation required. The conclusions are reached, having had due regard to potential in combination effects.
- 4.13. In the light of those conclusions, it is considered that it can safely be concluded that the development proposals would not give rise to an adverse effect on any European designated site by way of traffic related air quality. The uplift in dwelling numbers being considered as part of this planning application, over and above the allocation figure, is small in context and it is considered that the increase would not alter the conclusions reached in the Air Quality Habitat Regulations Assessment, given it's findings.
- 4.14. It is notable that the potential for such effects to arise as a result of the Appeal Proposals have not been raised by Natural England, Fareham Borough Council or Hampshire County Council during the consultation stage of the planning application. Given the foregoing, since no mitigation is necessary, impacts from traffic related air quality have been screened out for all relevant designated sites at the first stage of assessment.

Nutrient nitrogen

- 4.15. An Integrated Water Management Study (IWMS) for South Hampshire was commissioned, in 2016, by the Partnership for Urban South Hampshire (PUSH) Authorities, alongside the Environment Agency and Natural England. This study examined the projected delivery of development growth with regard to legislative and government policy requirements for

designated sites and wider biodiversity issues. This updated an earlier study undertaken in 2008. Broadly comparable studies for Chichester Harbour and Sussex were undertaken in 2018, although this work was largely on Water Framework Directive assessments.

- 4.16. The IWMS for South Hampshire, which was completed in March 2018, identified current uncertainty as to whether new housing growth can be accommodated without having a detrimental effect upon the water environment. It identified uncertainty as to the efficacy of catchment measures to deliver the required reductions in nitrogen levels, and uncertainty as to whether upgrades to wastewater treatment works will be sufficient to accommodate the quantity of new housing proposed.
- 4.17. In order to examine the issue further, relevant local planning authorities, together with the Environment Agency, Natural England and water companies, set up a Water Quality Working Group in South Hampshire to compliment that already in existence for Chichester. The objectives of these groups include identifying and analysing any existing gaps in evidence and evaluating the need for strategic level mitigation measures. The primary focus of the work is to address the aforementioned uncertainty associated with strategic local plan growth.
- 4.18. Following from the above, in 2018, Natural England specifically assessed the condition of relevant 'Solent harbours' designated sites. The aim was to evaluate the levels of nitrogen within the water environment and the associated impact on the designated sites.
- 4.19. This assessment revised and updated the condition assessment information for water quality pursuant to the qualifying interest features of the designated sites. Recorded levels of nitrogen in the harbours were analysed and then compared with evidence of phytoplankton and macroalgae (percentage cover of dense opportunistic green macroalgae).
- 4.20. It was determined that increased levels of nutrient nitrogen (in part through discharges from Waste water Treatment Works (WwTWs) was leading to degradation of the condition of qualifying interest features of those designated sites within the Solent (notably the harbours). On this basis, it was Natural England's advice that new residential developments within the Solent catchment should demonstrate nutrient neutrality in order to allow a conclusion that (in combination) the proposal would not adversely affect the integrity of the associated designated sites.
- 4.21. It is therefore considered that it cannot be concluded that no likely significant effect arises in relation to the following designated sites in respect of this pathway:
 - Portsmouth Harbour SPA and Ramsar site;
 - Solent and Southampton Water SPA and Ramsar site; and
 - Solent Maritime SAC.
- 4.22. This matter will be considered in further detail below, in relation to the Integrity test.

Recreational Pressure

- 4.23. Recreational use of designated sites is well documented as having the potential to cause disturbance to qualifying species interest features (particularly birds).
- 4.24. In addition to disturbance, recreational pressure can lead to direct habitat degradation through trampling, where footpaths are not maintained and / or other access management measures are inadequate.
- 4.25. Given the proximity of the Appeal Site to the various designated sites, their qualifying interest features and Conservation Objectives, in undertaking a precautionary approach to assessment, it is considered that it cannot be concluded that no likely significant effect arises in relation to the following designated sites in respect of this pathway:
- Portsmouth Harbour SPA and Ramsar site;
 - Solent and Southampton Water SPA and Ramsar site;
 - Solent Maritime SAC;
 - New Forest SPA and Ramsar site; and
 - New Forest SAC.
- 4.26. It should be noted that the New Forest SPA / SAC / Ramsar site is located at a considerably greater distance from the Appeal Site than the other designated sites. However, it is understood that Natural England consider that evidence is available to suggest that even at this distance, increased recreational pressure cannot be ruled out as a pathway for potential adverse effects on Integrity (in combination). Therefore, in adopting a precautionary approach to assessment, recreational pressure on the New Forest SPA / SAC / Ramsar site has been screened into the next stage of assessment.
- 4.27. Detailed information in relation to this pathway for adverse effects to arise, is discussed below in relation to the Integrity test.

Consideration of the Integrity test at Regulation 63(5)

Disturbance effects

- 4.28. Such effects are considered to be focussed upon visual/physical disturbance arising predominantly from walkers (including dog walking) and cyclists. Dog walking is an often cited contributing factor to disturbance effects on birds, mainly because dogs will often initiate a predator / prey flight response especially when ran off the lead. When off the lead they will often stray from paths (which otherwise act to manage visitor movements especially in a coastal or wetland environment), and they may actively chase birds.
- 4.29. During winter, birds are particularly susceptible to adverse effects through disturbance due to food sources being generally scarcer and efficient use of energy being of heightened importance to survival. As such, increased disturbance could give rise to an adverse effect on the birds during these harsher periods. Such effects would be relevant to all of the relevant SPAs and Ramsar sites.

- 4.30. During the breeding season, disturbance can give rise to avoidance of otherwise suitable nesting or foraging habitat. Dogs in particular can also flush birds from nests resulting in nest / egg abandonment and chick predation. With reference to the relevant SPAs and Ramsar sites, such effects would be relevant to all but Portsmouth Harbour, which only qualifies (SPA and Ramsar) on account of wintering populations.

Quantifying the potential effect of the proposals

- 4.31. In terms of the number of potential additional visitors to the SPA / SAC / Ramsar site, the following information is considered relevant.
- 4.32. The Appeal Proposals will deliver up to 125 new homes. Using information available from the 2011 census, for Fareham borough the average house occupancy rate is 2.4 persons per house. On this basis the proposals could result in an additional 300 new residents. Ecology Solutions is mindful that this figure can only be used as a guide, not least because the Appeal Proposals are concerned with outline planning permission and the number of units and mix of units (differing bedroom numbers) are not fixed. Only the upper number of units would be set by any permission.
- 4.33. For the purpose of this assessment, the figure of 300 new residents is considered appropriate to take forward, but an appropriate level of caution has been applied.
- 4.34. It is to be expected that a proportion will require areas to walk dogs. Information available from the Pet Food Manufacturers Association² shows that for 2021 it is estimated that in the UK 33% of households own a dog/s.
- 4.35. In relation to dog walking therefore, it would be expected that 41 new households would own at least one dog³. On the basis that dogs are often walked twice a day, taking a precautionary approach it can be assumed that the proposals associated with the residential element of the scheme would generate up to an additional 82 dog walks a day. This can be viewed as a precautionary estimate on the basis that the detailed proposals may not deliver the full 125 units.
- 4.36. In adopting a precautionary approach, it has been assumed that, at least from time to time, new residents would access the relevant designated sites. This assumption has been made in relation to all of the relevant designated sites, notwithstanding the significant separation of the New Forest SPA / SAC / Ramsar site from the Appeal Site. The New Forest SPA / SAC / Ramsar site is located just over 13km west of the Appeal Site (straight line distance), but a journey of considerably longer would be required in real terms given that Southampton Water separates the Appeal Site from the New Forest. Indeed, it is notable that a detailed assessment of recreational pressure was undertaken by Footprint Ecology with the results and proposed mitigation strategy published in the document titled "Impacts of recreation and potential mitigation approaches" (2020). That assessment specifically stated that Fareham borough should be excluded from the zone

² <https://www.pfma.org.uk/pet-population-2021>

³ $33/100 \times 125 = 41$

of influence attributed to recreational impacts at the New Forest because of this separation. However, it is noted that Natural England do not agree with that approach. Instead, it purports that the evidence base supports the inclusion of Fareham borough within the zone of influence, which is defined as 13.8km straight line distance, extending to 15km for developments of around 200 units or more. A copy of email correspondence confirming Natural England's position is included at Annex 8.

- 4.37. Whilst Ecology Solutions consider that the evidence base clearly demonstrates that residents of Funtley are not likely to give rise to significant additional pressures at the New Forest SPA / SAC / Ramsar site, the position of Natural England is fully acknowledged. In adopting a precautionary approach to assessment, it is considered that the package of mitigation / avoidance measures associated with the Appeal Proposals should include measures targeted at avoiding increased recreational pressure at the New Forest SPA / SAC / Ramsar site.

Mitigation / avoidance measures

- 4.38. The proposed mitigation / avoidance package of measures includes both open space provision and contributions towards strategic schemes which deliver initiatives at the designated sites themselves.
- 4.39. It is important to recognise the significant open space provision which will be delivered by the Appeal Proposals. This includes areas of open space delivered within the housing scheme itself and also a large community park (total area of 9.89ha). Together, these new resources will offer dog walking and other recreational opportunities on the doorstep of new residents. Also, significantly, these resources will offer recreation opportunities for existing residents of Funtley and the local area, attracting visitors who may otherwise use the designated sites for recreation purposes (e.g. walking, dog walking, cycling or running). Whilst it would be expected that new residents would also use other sites for recreation, it can be concluded that a significant proportion of walks (and dog walks in particular) would very likely be undertaken within the community park and other open space associated with the Appeal Site.
- 4.40. It is considered that the community park would in fact deliver a user experience akin to Suitable Alternative Natural Greenspace (SANG) which is an accepted European site mitigation / avoidance measure, promoted by Natural England. The key principle behind SANG is to deliver a quality recreation experience for the public, with easy access, making it more attractive than visiting the designated site/s. The SANG does not need to account for all walks / dog walks which would otherwise be undertaken at the European site/s by new residents, since existing local residents will also be attracted to the SANG. To be effective, the SANG needs to provide 'net betterment' in terms of visitor numbers to the European site.
- 4.41. The community park will include large areas of freely accessible grassland where dogs can be run off the lead. It will also have woodland, areas of scrub, trees and hedgerows. It will offer a natural and aesthetically pleasing place to walk and undertake other activities, all located in easy walking distance from the new homes and with connectivity to nearby houses /

settlements. It is also of a scale which would be acceptable for use as SANG, offering a range of different walk lengths.

- 4.42. It is widely accepted that the coast has a particular draw to people and that they will still travel to the coast for recreation at least some of the time. On this basis, the principle mitigation / avoidance mechanism used for coastal European designated sites is the provision of a package of measures targeted at managing and monitoring visitor pressures at the designated site itself. Typical initiatives include wardening (e.g. policing 'dogs on lead' policies), signage / interpretation, provision of dog bins, footpath creation / maintenance and education. Monitoring is also an integral part of any such strategy, allowing adaptations to be made to individual elements of the strategy where required.

Solent European designated site mitigation

- 4.43. The Solent Recreation Mitigation Strategy (2017) is the relevant published strategy relating to the avoidance of adverse effects on European designated sites associated with the Solent (including those of relevance to this sHRA). The Solent Recreation Mitigation Partnership formulates, implements and monitors the strategy. Funding is through developer contributions transferred from the relevant local planning authorities as part of a cross boundary approach to mitigation. The Partnership itself comprises Natural England, the Royal Society for the Protection of Birds (RSPB) and the fifteen Solent local authorities, including Fareham Borough Council.
- 4.44. The Solent Recreation Mitigation Strategy 2017 states that the baseline developer contribution is the equivalent of £564 per dwelling however, in practice this is charged on a sliding scale (based upon bedroom numbers per dwelling) in order to more accurately reflect the numbers of new residents likely to be generated. The costs outlined are as follows:
- “£337 for 1 bedroom dwelling;
 - £487 for 2 bedroom dwelling;
 - £637 for 3 bedroom dwelling;
 - £749 for 4 bedroom dwelling; and
 - £880 for 5 bedrooms or more.”
- 4.45. The figures are increased on 1st April each year in line with the Retail Price Index (RPI), rounded to the nearest whole pound.
- 4.46. In order to address matters concerning recreational pressure on the Solent European designated sites, it is standard practice among the relevant local planning authorities to seek the appropriate level of financial contribution towards the Solent Recreation Mitigation Strategy. The contribution is secured through a legal obligation in the form of either a Unilateral Undertaking or Section 106.
- 4.47. The Appellants are committed to providing the relevant financial contribution, with this being secured through an appropriate legal mechanism. In this light it can be concluded that no adverse effect on the Integrity of the Solent European designated sites would arise, subject to the securing of the contribution and its payment ahead of first occupation.

New Forest SPA / SAC / Ramsar site mitigation

- 4.48. As already discussed, the Appeal Proposals include for significant provision of open space which can be viewed as providing an alternative recreational resource to the SPAs / SACs and Ramsar sites in the local area. It is considered that such a provision will reduce the potential for use of the New Forest by new (and existing) residents.
- 4.49. However, the position of Natural England is noted (see Annex 8), as is the need for precaution when addressing the tests of the Habitats Regulations. It is noted that the National Park Authority have adopted a Habitat Management Scheme (2020). This approach to mitigation / avoidance is comparable to that discussed above in relation to the Solent European sites. Financial contributions are secured through legal mechanisms and the funds are used to implement targeted visitor management and monitoring initiatives, all of which are fully costed in order to derive a 'per unit' charge. That strategic approach has been agreed with Natural England and has been running for some time.
- 4.50. As already discussed, Fareham borough is well removed from the New Forest and for Fareham this is a new issue, subject to discussions between Fareham Borough Council and Natural England. However, it is clear that a suitable mechanism exists for appropriate and proportionate mitigation to be delivered and this is discussed below.
- 4.51. Regard has been had to the approach adopted in relation to the appeal regarding Land East of Crofton Cemetery, Stubbington (also within the jurisdiction of Fareham Borough Council). In this case, the Appellants had used the data on visitor use of the New Forest contained within the Footprint Ecology assessment report⁴, to derive a pro-rata financial contribution. The Appellants had adopted a precautionary approach in view of the data and had proposed a figure of £351.20 per new dwelling which was 10% of the National Park Authority Habitat Management Scheme contribution. With reference to the cross-boundary approach of the Solent Disturbance and Mitigation Project (described in detail above), the National Parks Authority confirmed to the Inspector that it was content to receive transferred funds (secured through legal obligation) from Fareham Borough Council, towards its mitigation scheme. It is understood that Natural England confirmed to the planning Inspector (by email dated 24th November 2021) that it would raise no further concerns in the event the Inspector was content that the approach was suitably precautionary, and funds were appropriately secured.
- 4.52. Further to the above, on 7th December 2021, Fareham Borough Council's Executive Committee agreed with the recommendation to adopt an Interim Mitigation Solution as contained within the report "Implications of Natural England advice on New Forest Recreational Disturbance" which was considered at the meeting of the same date. The mitigation strategy sets out a calculated cost per dwelling of **£247.05** to be secured by legal obligation. The funds will deliver a range of measures aimed at delivering enhanced open spaces (e.g. Country Parks) in the Borough, which will

⁴ Footprint Ecology, 2020, Impacts of recreation and potential mitigation approaches.

deter people from traveling to the New Forest for recreation purposes. The measures also include monitoring and a contribution towards access management and wardening at the New Forest SPA / SAC itself. A copy of this Interim Mitigation Strategy is included at Annex 9. It is not known at the time of producing this sHRA whether Natural England has fully endorsed the Fareham Borough Council Interim Mitigation Strategy.

- 4.53. It is notable that the Interim Mitigation Strategy is to apply to developments that are “unable to provide on-site mitigation”, although no definition of what constitutes suitable on-site mitigation (e.g. scale) is provided. In the case of the Appeal Proposals, as has been discussed above, the Appeal Proposals do deliver a very significant area of open space, which could broadly be considered a SANG. However, delivering the proposed open space provision alone, would not address Natural England’s concerns regarding a need to deliver measures at the SPA / SAC itself, as referenced in Natural England’s project specific advice on the issue (see Annex 8), nor would such an approach contribute to monitoring the effectiveness of the package of measures.
- 4.54. In view of the foregoing, it is considered that an appropriate and proportionate package of mitigation / avoidance measures includes a financial contribution towards the Fareham Borough Interim Mitigation Strategy (**£247.05** per dwelling), with the additional security achieved through the delivery of the on site open space to be viewed as a net benefit of the Appeal Proposals, giving further comfort as to the efficacy of the proposed measures.
- 4.55. Following from the above, the Appellants will enter into a legal obligation (e.g. Unilateral Undertaking) with Fareham Borough Council to pay the appropriate financial contribution, which would equate to **£30,881.25** based on 125 units.
- 4.56. It can be concluded that no adverse effect on the Integrity of the New Forest SPA / SAC / Ramsar site would arise, subject to the securing of the contribution and its payment ahead of first occupation.

Nutrient nitrogen

- 4.57. In order to address the issue of nutrient nitrogen, the nitrogen budget for the Appeal Proposals was calculated using Natural England methodology. This confirms that the Appeal Proposals would need to mitigate against a surplus of 68.8 kg/N/year. A copy of the calculations and summary discussion regarding the results and correspondence with Fareham Borough Council, is included at Annex 10.
- 4.58. For clarity, the nitrogen budget calculation identifies that the proposed new community park is 9.88ha in size⁵, of which 6.78ha is in use for lowland grazing. Part of that grazing land (3.06ha) is already set aside to mitigate the near complete housing development on the north side of Funtley Road and this area of land is secured through the Section 106 accompanying that development. Since 3.06ha is needed to mitigate the development at Funtley North, 3.72ha of mitigation land would be available at the

⁵ Subsequently revised area is greater, at 9.89ha.

community park site to assist in mitigating the nitrates generated by the Appeal Proposals. 3.72ha would only mitigate 29.76 kg/N/yr leaving 39.04 kg/N/yr of nitrate mitigation still needed.

- 4.59. The balance of nitrate (39.04 kg/N/yr) to be mitigated through the purchasing of credits from the Warnham Estate nitrate mitigation scheme and a contract is in place. A copy of the agreement relating to this matter is included at Annex 11. It is understood that Fareham Borough Council are content that matters relating to nutrient nitrogen are resolved.
- 4.60. In view of the above, subject to the securing of the measures (payment being made for the nitrogen credits) it can be concluded that the Appeal Proposals will not give rise to an adverse effect on the Integrity of the Solent European / Ramsar sites through increases in nutrient nitrogen.

Summary Assessment Conclusion

- 4.61. This sHRA has taken a precautionary approach to assessment and regard has been had to a proportionate response to any potential adverse effects on the Integrity of relevant European / Ramsar sites. In view of the proposed mitigation / avoidance strategies, no adverse effect on the Integrity of any relevant designated site has been identified when the plan project is considered both alone and in combination with other plans or projects.

5. SUMMARY AND CONCLUSIONS

- 5.1. This sHRA report has been prepared by Ecology Solutions, in order to assist the Competent Authority (in this case the Planning Inspector appointed on behalf of the Secretary of State) when applying the legal tests associated with the Habitats Regulations. This sHRA provides sufficient information for the Competent Authority to assess the implications of the Appeal Proposals on designated sites of nature conservation importance protected under the Habitats Regulations, and sites that are given the same protection in accordance with advice in the NPPF (2021).
- 5.2. Outline planning permission is sought (by way of Appeal) to provide up to 125 one, two, three and four-bedroom dwellings including 6 Self/Custom build plots, Community Building or Local Shop (Use Class E & F.2) with associated infrastructure, new community park, landscaping and access.
- 5.3. The relevant European / Ramsar sites are as follows:
- Portsmouth Harbour Special Protection Area (SPA), (approximately 2.8km km south of Appeal Site);
 - Portsmouth Harbour Ramsar site (approximately 2.8km km south of Appeal Site);
 - Solent and Southampton Water SPA (approximately 3.6km south of the Appeal Site);
 - Solent and Southampton Water Ramsar site (approximately 3.6km south of the Appeal Site);
 - Solent Maritime SAC (approximately 3.6km south of the Appeal Site);
 - New Forest SPA (approximately 13.1km west of the Appeal Site);
 - New Forest SAC (approximately 13.1km west of the Appeal Site);
and
 - New Forest Ramsar site (approximately 13.1 km west of the Appeal Site).
- 5.4. Having regard to the formal Conservation Objectives and qualifying interest features for each designated site, and also the nature of the Appeal Proposals and the distances involved, specific consideration has been given to the following pathways for likely significant effects to arise on the designated sites:
4. Effects from traffic related air quality;
 5. Effects relating to nutrient nitrogen; and
 6. Effects from increased recreational pressure.
- 5.5. Other possible pathways for likely significant effects have been discounted.
- 5.6. The approach to assessment has been precautionary and is in line with relevant jurisprudence and guidance pertaining to assessment under the Habitats Regulations 2017 (as amended).
- 5.7. Potential significant effects from traffic related air quality have been screened out for all of the relevant designated sites, with no specific mitigation required.

- 5.8. Potential significant effects from increased recreational pressure have been screened in for all of the relevant designated sites, with Appropriate Assessment therefore required.
- 5.9. Potential significant effects relating to nutrient nitrogen have been screened in for the Solent European sites (only), with Appropriate Assessment therefore required.
- 5.10. Insofar as matters concern nutrient nitrogen, the nitrogen budget for the Appeal Proposals was calculated using Natural England methodology (v5, June 2020). This confirms that the Appeal Proposals would need to mitigate against a surplus of 68.8 kg/N/year. 3.72ha of mitigation land within the proposed community park will be used to assist in mitigating nitrates generated by the Appeal Proposals. The balance of the nitrates (39.04 kg/N/yr) is to be mitigated through the purchasing of credits from the Warnham Estate nitrate mitigation scheme. Thus, the initial credits will be secured with the Council (in the s.106) as part of the open space / community park and the Warnham Estate agreement covers the 39.04 remaining credits. A contract is already in place the Warnham Estate and it is understood that Fareham Borough Council are content that matters relating to nutrient nitrogen are resolved.
- 5.11. Regarding increased recreation pressure at the Solent European designated sites, it is standard practice among the relevant local planning authorities to seek the appropriate level of financial contribution towards the Solent Recreation Mitigation Strategy (secured by Unilateral Undertaking or Section 106). The Appellants are committed to providing the relevant financial contribution, with this being secured through an appropriate legal mechanism.
- 5.12. Regarding increased recreation pressure at the New Forest SPA / SAC / Ramsar site, full regard has been had to the position of Natural England and its view that mitigation is required, despite the separation of this designated site/s from the Appeal Site. On 7th December 2021, Fareham Borough Council's Executive Committee agreed with the recommendation to adopt an Interim Mitigation Solution. The mitigation strategy sets out a calculated cost per dwelling of **£247.05** to be secured by legal obligation. The funds will deliver a range of measures aimed at delivering enhanced open spaces (e.g. Country Parks) in the Borough. The measures also include monitoring and a contribution towards access management and wardening at the New Forest SPA / SAC itself. The Appellants will enter into a legal obligation (e.g. Unilateral Undertaking) with Fareham Borough Council to pay the appropriate financial contribution, which would equate to **£30,881.25** based on 125 units.
- 5.13. Furthermore, additional security in relation to matters concerning recreational effects is achieved through the delivery of the on-site open space (including community park). This is to be viewed as a net benefit of the Appeal Proposals, giving further comfort as to the efficacy of the proposed measures.
- 5.14. By way of overall conclusion, it can be concluded beyond reasonable scientific doubt that the Appeal Proposals deliver appropriate and

proportionate mitigation / avoidance measures where required, and that subject to the securing of these measures, no adverse effect on the Integrity of any European / Ramsar site (Habitats site) will occur.

PLANS

PLAN ECO1

Relevant Designated Site Locations



Key:

- Appeal Site Boundary
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar Site



ECOLOGY SOLUTIONS
Part of the ES Group

Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
ecologysolutions.co.uk

7601 : FUNTLEY SOUTH

PLAN ECO1: RELEVANT DESIGNATED
SITE LOCATIONS

ANNEXES

ANNEX 1

Legislative Background and Relevant Guidance

1. LEGISLATIVE BACKGROUND AND RELEVANT GUIDANCE

1.1. Legislation and relevant case law

- 1.1.1. The Conservation of Habitats and Species Regulations 2017 (as amended) and preceding regulations (together "the Habitats Regulations") give effect to Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna ("Habitats Directive") and Council Directive 2009/147/EC on the conservation of wild birds in England and Wales ("Wild Birds Directive". In accordance with the EU-UK Withdrawal Agreement and the European Union (Withdrawal Agreement) Act 2020, the transitional provisions under which European law such as the Habitats Directive and the Wild Birds Directive had effect in Great Britain ended on 31 December 2020 (EU exit day).
- 1.1.2. To ensure that habitat and species protection and standards continue to be implemented in England and Wales in the same way or in an equivalent way after EU exit day, the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019/579 made necessary amendments to the Habitats Regulations. The changes are explained in the Policy paper "Changes to the Habitats Regulations 2017", published on 1 January 2021 ("Policy paper"). Most changes are concerned with the transfer of functions from the European Commission to appropriate authorities in England and Wales. There are no changes to the substance of the HRA process or that affect the conclusions reached in this HRA Report, which identifies amendments that are relevant in the process of determining the DCO.
- 1.1.3. On 24 February 2021 the Department for Environment, Food & Rural Affairs (Defra), NE, Welsh Government, and Natural Resources Wales published two guidance notes on Habitats Regulation Assessment and a derogation notice form:
 - Guidance: Habitats regulations assessments: protecting a European site: How a competent authority must decide if a plan or project proposal that affects a European site can go ahead ("the HRA Guidance");
 - Guidance: Duty to protect, conserve and restore European sites: Competent authorities must take action to help protect, conserve and restore the protected habitats and species of European sites ("Duty to conserve Guidance")
 - Form: Habitats regulations assessment: derogation notice to be used by competent authorities when giving notice under regulation 64(5) of a decision to allow a plan or project that has an adverse effect on a European site to go ahead ("Derogation notice form").
- 1.1.4. Article 4 of the Habitats Directive required the United Kingdom to contribute to the creation of the Natura 2000 network, a coherent European ecological network of special areas of conservation that shall enable the natural habitat types and species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range. Article 1 (e) defines "conservation status" of a natural habitat as "the

sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species" within the European Union ("EU"). Conservation status will be "favourable" when:

"- its natural range and areas it covers within that range are stable or increasing, and

- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and

- the conservation status of its typical species is favourable...".

1.1.5. For the purposes of the Habitats Regulations, all references to Natura 2000 are now to be construed as references to the national site network, which is defined in amended regulation 3 to mean *"the network of sites in the United Kingdom's territory consisting of such sites as—*

- a) immediately before exit day formed part of Natura 2000; or*
- b) at any time on or after exit day are European sites, European marine sites and European offshore marine sites for the purposes of any of the retained transposing regulations"*

1.1.6. The location of the Appeal Site in proximity to international / European designated sites means that the Habitats Regulations are relevant. The Appeal Site is not directly connected with or necessary to the management of a site forming part of the national site network. Therefore, it is necessary to consider whether it is likely to have a significant effect on any such site, either individually or in combination with other plans or projects.

1.1.7. The Appeal Site also lies in relatively close proximity to Ramsar sites. The UK is a signatory to the Convention on Wetlands of International Importance Especially as Wildfowl Habitat 1971, commonly known as the Ramsar Convention after the town in which it was signed. Parties to the Ramsar Convention are obliged to designate particular sites as Wetlands of International Importance.

1.1.8. The obligations imposed by the Convention are in themselves not particularly strong, in that they require the promotion and encouragement of the stated aims, rather than any specific action. However, as a matter of policy¹, Ramsar sites receive the same protection as designated SPAs and SACs. The procedures applicable to European sites are therefore to be applied to Ramsar sites, even though these are not protected by the Habitats Regulations as a matter of law.

1.1.9. The relevant legal and policy framework is discussed below.

Habitats and Birds Directives

1.1.10. Although neither the Habitats or Birds Directives now have the force of law in England, they will remain relevant in the interpretation and application of the Habitats Regulations 2017 unless and until Parliament otherwise

¹ As noted at paragraph 181 (b) of the National Planning Policy Framework (July 2021)

modifies those Regulations. This is because the Habitats Regulations have the status of "retained EU law" for the purposes of the Withdrawal Agreement, which provides at Section 6(3) that, so far as retained EU law remains unmodified by UK legislation, it shall be interpreted in accordance with retained domestic case law, retained EU case law and retained general principles of EU law. This section therefore describes relevant aspects of the Habitats and Birds Directives and case law.

- 1.1.11. Under the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, commonly referred to as the Habitats Directive (Council Directive 92/43/EEC), Member States are required to take special measures to maintain the distribution and abundance of certain priority habitats and species (listed in Annexes I and II of the Directive).
- 1.1.12. Each Member State is required to designate the most suitable sites as Special Areas of Conservation (SACs). All such SACs will form part of the Natura 2000 network under Article 3(1) of the Habitats Directive.
- 1.1.13. Article 2(3) sets out that member states have a duty, in exercising their obligations under the Habitats Directive to:

“.. take account of economic, social and cultural requirements and local characteristics.”
- 1.1.14. Under the EC Directive on Wild Birds (the Birds Directive) (Council Directive 2009/147/EC, formerly 79/409/EEC), Member States are required to take special measures to conserve the habitats of certain rare species of birds (listed in Annex I of the Directive) and regularly occurring migratory birds.
- 1.1.15. Each Member State is required to classify the most suitable areas of such habitats as SPAs. This is designed to protect wild birds, and to provide sufficient diversity of habitats for all species so as to maintain populations at an ecologically sound level. All Bird Directive SPAs are part of the Natura 2000 network under article 3(1) of the Habitats Directive.
- 1.1.16. Thus, there is an obligation under the Habitats Directive and the Birds Directive for member states to designate sites before turning to measures for their protection.
- 1.1.17. The protection afforded to SPAs and SACs is delivered through Article 6 of the Habitats Directive.
- 1.1.18. Article 6(2) requires member states to take appropriate steps to avoid the deterioration of natural habitats and disturbance of species for which the sites have been designated, in so far as the disturbance could be significant in relation to the objectives of the Directive. Article 6(3) and Article 6(4) together set out a process known as Habitat Regulations Assessment (HRA) that comprises between one and five stages, depending on the outcome of assessments for each project. The five stages require the decision-maker to:
 - assess whether there would be a Likely Significant Effect (“LSE”) on any European site (Stage 1); and, if such an effect cannot be excluded,

- determine whether there would be an adverse effect on the integrity of any European site (Stage 2); and, if so,
 - consider whether there are any feasible alternative solutions that would be less damaging or avoid damage to the site (Stage 3); and, if not,
 - determine whether there are imperative reasons of overriding public interest (“IROPI”) why the development should proceed (Stage 4); and, if so,
 - consider whether all necessary compensatory measures have been secured to fully compensate for the negative effects of the proposal. The compensatory measures must not have a negative effect on the national network of European sites as a whole (Stage 5).
- 1.1.19. The HRA Guidance (February 2021) presents the HRA process as having up to three stages: 1. Screening; 2. Appropriate Assessment and 3. Derogation. Stage 3: Derogation comprises stages 3 – 5 above. If an appropriate assessment is undertaken and a proposed development fails to meet the integrity test then permission can only be granted for a development if it passes all three of the legal tests that are required to qualify for a derogation: i.e. no feasible alternative solutions, IROPI and necessary compensatory measures.

The Conservation of Habitats and Species Regulations 2017 (as amended)

- 1.1.20. The Conservation of Species and Habitats Regulations 2017, (Habitats Regulations), transposed the requirements of the Habitats Directive and Birds Directive into UK legislation.
- 1.1.21. As noted above, SACs and SPAs in the UK no longer form part of the European Union’s Natura ecological network. Instead, from 31 December 2020 these sites form part of the national site network (‘NSN’), which also includes any further SACs and SPAs designated under the Habitats Regulations.
- 1.1.22. The Habitats Regulations, regulation 16A sets out the management objectives for the NSN, places management obligations on appropriate authorities and sets out the considerations to which such authorities must have regard in the discharge of their obligations.
- 1.1.23. The process to be followed where a competent authority proposes to undertake or to give any consent, permission or other authorisation for a plan or project that is likely to have a significant effect on a European site and is not directly connected with or necessary to the management of that site is set out in regulation 63 of the Habitats Regulations:

“63(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for a plan or project, which:-

(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects) and

(b) is not directly connected with or necessary to the management of the site,

must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives.

63(3) The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.

63(5) In the light of the conclusions of the assessment, and subject to regulation 64, the authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).

63(6) In considering whether a plan or project will adversely affect the integrity of the site, the authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given.”

- 1.1.24. Regulation 63 of the Habitats Regulations therefore sets out an assessment process that will comprise one or two stages, depending on the outcome of the first stage. The first stage is to determine whether the plan / project is likely to have a significant effect on the European site. If that possibility cannot be excluded then the second stage is to undertake an appropriate assessment of the implications of the plan or project for the European site in view of the site's conservation objectives.
- 1.1.25. Some key concepts of the Habitats Directive and Habitats Regulations have been clarified through case law. The most pertinent cases in relation to the development proposals are: the *Waddenzee* Judgement; the *Sweetman* Case; the *People over Wind* Judgement; and the *Holohan* Judgement. These are considered in chronological order below to illustrate recent changes to case law, and are discussed below.

Case Law

Waddenzee Judgement

- 1.1.26. In the *Waddenzee* case (C-127/02) [2004] the European Court of Justice decided that an appropriate assessment is required for a plan or project where there is a probability or a risk that it will have a significant effect on the SPA. The Judgement states (at paragraph 3(a)) that:

“...any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects.”

1.1.27. Hence, the need for an Appropriate Assessment should be determined on a precautionary basis.

1.1.28. The Judgement gives clarity that the test of 'likely significant effect' should also be undertaken in view of the European site's Conservation Objectives. It is stated at paragraph 3(b) that:

“where a plan or project not directly connected with or necessary to the management of a site is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site.”

1.1.29. Paragraph 4 of the Judgement emphasises the requirement for the appropriate assessment to rely on objective scientific information:

“...an appropriate assessment...implies that, prior to its approval, all the aspects of the plan or project which can, by themselves or in combination with other plans or projects, affect the site's conservation objectives must be identified in the light of the best scientific knowledge in the field. The competent national authorities, taking account of the appropriate assessment of the implications...for the site concerned in the light of the site's conservation objectives, are to authorise such an activity only if they have made certain that it will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects.”

Sweetman Case

1.1.30. Further guidance in relation to the consideration of impacts in the light of the Habitats Regulations is provided in the *Sweetman* case (*Sweetman v An Bord Pleanala* (C-258/11) [2014]). The case as set out by the Advocate General considered in detail the test for likely significant effect in paragraphs 50 and 51:

“50. The test which that expert assessment must determine is whether the plan or project in question has ‘an adverse effect on the integrity of the site’, since that is the basis on which the competent national authorities must reach their decision. The threshold at this (the second) stage is noticeably higher than that laid down at the first stage. That is because the question (to use more simple terminology) is not ‘should we bother to check’ (the question at the first stage) but rather ‘what will happen to the site if this plan or project goes ahead; and is that consistent with “maintaining or restoring the favourable conservation status” of the habitat or species concerned’...

51. It is plain, however, that the threshold laid down at this stage of Article 6(3) may not be set too high, since the assessment must be undertaken having rigorous regard to the precautionary principle. That principle applies where there is uncertainty as to the existence or extent of risks. The competent national authorities may grant authorisation to a plan or project only if they are convinced that it will not adversely affect the integrity of the site concerned. If doubt remains as to the absence of adverse effects, they must refuse authorisation.”

- 1.1.31. The Court of Justice of the European Union (CJEU) agreed with the Advocate General's conclusions, and held:

“40. Authorisation for a plan or project, as referred to in Article 6(3) of the Habitats Directive, may therefore be given only on condition that the competent authorities – once all aspects of the plan or project have been identified which can, by themselves or in combination with other plans or projects, affect the conservation objectives of the site concerned, and in the light of the best scientific knowledge in the field – are certain that the plan or project will not have lasting adverse effects on the integrity of that site. That is so where no reasonable scientific doubt remains as to the absence of such effects.”

- 1.1.32. Hence a plan or project may be authorised only if no reasonable scientific doubt remains as to the absence of effects. Reasonable scientific doubt will exist if the evidence is not sufficiently conclusive, or if there are gaps in the information.

Dilly Lane Case

- 1.1.33. Reference to this case is made on the basis that it aids in understanding the importance (in assessment terms) of the People Over Wind case discussed below.
- 1.1.34. The Secretary of State's decision to allow an appeal in relation to applications for a total of 170 new homes on a greenfield site off Dilly Lane, Hartley Wintney was challenged in High Court by Hart District Council. The legal challenge was made on the grounds that the Secretary of State had erred in departing from her Inspector's conclusions as to the effects on the Thames Basin Heaths SPA.
- 1.1.35. A key issue for the case was whether mitigation measures should be disregarded when assessing whether the project would have a likely significant effect on the SPA. Mr Justice Sullivan (now Lord Justice Sullivan) ruled in favour of the Secretary of State after concluding that there was no absolute legal rule that mitigation measures should be disregarded during the first stage – 'the likely significant test':

“55. The competent authority is not considering the likely effect of some hypothetical project in the abstract. The exercise is a practical one which requires the competent authority to consider the likely effect of the particular project for which permission is being sought. If certain features (to use a neutral term) have been incorporated into that project, there is no sensible reason why those features should be ignored at the initial, screening, stage merely because they have been incorporated into the project in order to avoid, or mitigate, any likely effect on the SPA.”

People over Wind Case

- 1.1.36. The CJEU in *People over Wind and Sweetman v Coillte Teoranta* (C-323/17) [2018] has reversed the position adopted under the *Dilly Lane* Decision, with the CJEU ruling that:

“Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.”

- 1.1.37. In accordance with this ruling, avoidance or mitigation measures cannot be considered at the first stage of the test (the ‘Likely Significant Effect’ stage) and can only be considered at the Appropriate Assessment stage. The *People over Wind* ruling therefore overrules previous domestic case law in this regard.

ESB Wind Developments (Sweetman III) [Case C-164/17]

- 1.1.38. In this case a request for a preliminary ruling was made to the CJEU concerning the interpretation of Articles 6(3) and 6(4) of Council Directive 92/43/EEC (the Habitats Directive). The request was made in relation to proceedings brought by Mr Peter Sweetman and Edel Grace against the decision of An Bord Pleanála (National Planning Appeals Board, Ireland) concerning the latter’s decision to grant ESB Wind Developments Ltd and Coillte permission for a wind farm project within an SPA. The ruling was handed down on 25th July 2018.
- 1.1.39. This ruling distinguishes between, for the purpose of the application of Articles 6(3) and 6(4) of the Directive, ‘mitigation’ that consists of measures intended to avoid or reduce harm to the protected site, and measures intended to compensate for any harm (Compensatory measures). It is stated:

“Article 6 of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, where it is intended to carry out a project on a site designated for the protection and conservation of certain species, of which the area suitable for providing for the needs of a protected species fluctuates over time, and the temporary or permanent effect of that project will be that some parts of the site will no longer be able to provide a suitable habitat for the species in question, the fact that the project includes measures to ensure that, after an appropriate assessment of the implications of the project has been carried out and throughout the lifetime of the project, the part of the site that is in fact likely to provide a suitable habitat will not be reduced and indeed may be enhanced may not be taken into account for the purpose of the assessment that must be carried out in accordance with Article 6(3) of the directive to ensure that the project in question will not adversely affect the integrity of the site concerned; that fact falls to be considered, if need be, under Article 6(4) of the directive.”

Holohan Judgement

- 1.1.40. In the case of *Holohan v. An Board Pleanala* (C-461-17) [2018], the CJEU considered further the assessment process to be adopted when considering potential impacts on a European designated site.
- 1.1.41. In considering this case, the CJEU clarified the need for a thorough assessment and certainty in the conclusions reached. The judgement also identified that the scope of an Appropriate Assessment may have to extend beyond the designated habitats and the species for which the habitat has been listed.
- 1.1.42. The Advocate General's Opinion stated that "*the assessment must therefore unequivocally demonstrate why the protected habitat types and species are not adversely affected*", and notes that "*mere silence in respect of certain habitat types or species... will not generally amount to complete, precise and definitive findings capable of removing all reasonable scientific doubt as to the effects of the work under assessment*".
- 1.1.43. Drawing the case law together, as a result of the CJEU interpretations of Article 6(3) and (4) of the Habitats Directive, a distinction is now drawn between the following:
- Conservation measures for special areas of conservation that correspond to the ecological requirements of the natural habitats and species and maintain or restore natural habitats at a favourable conservation status. These should be distinguished from measures proposed as part of a proposed development.
 - Measures that are integral parts of a proposed development that are not intended to avoid or reduce direct adverse effects. Provided these are not avoidance or mitigation measures they may be taken into account in Stage 1 (screening).
 - Protective measures forming part of a proposed development that are intended to avoid or reduce any direct adverse effects to ensure that the LDO Scheme does not adversely affect the integrity of a European site. These may not be taken into account in Stage 1 but can be taken into account in Stage 2.
 - Measures that are aimed at compensating for the negative effects of a proposed development on a European site and that cannot be taken into account in the assessment of the implications of the project (Habitats Directive Article 6(4); Habitats Regulations Regulation 64) but are relevant to an evaluation at Stage 5.

1.2. **Guidance and other Relevant Documents**

- 1.2.1. Guidance on the interpretation of key terms and concepts contained within the European and UK legislation of relevance to European designated sites is provided through several documents issued by the European Commission and national organisations such as the Joint Nature Conservation Committee (JNCC) and Natural England. This guidance is discussed below.

Managing Natura 2000 Sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC

- 1.2.2. The document entitled “Managing Natura 2000 Sites the provisions of article 6 of the ‘Habitats’ Directive 92/43/CEE”, was published by the European Commission in 2000 Its purpose was to provide guidelines to the Member States on the interpretation of certain key concepts used in Article 6 of the Habitats Directive.
- 1.2.3. In January 2019 the European Commission published updated guidance in relation to managing Natura 2000 sites, following that initial guidance published in 2000.
- 1.2.4. The primary purpose of the revision was to incorporate relevant rulings of the Court of Justice of the European Union (EU) which have been issued since the initial guidance was published in 2000. It also integrates, into a single document, other relevant European Commission notes / guidance documents. Those key rulings (of the Court of Justice of the EU) and other relevant European Commission notes / guidance are discussed above in this report. The revised guidance provides clarifications of key concepts to Member State, authorities and stakeholders involved in the management of Natura 2000 sites (e.g. SPAs and SACs).
- 1.2.5. This document advises at Section 2.3.3 that conservation measures must correspond to the ecological requirements of the habitats and species present for which the site is designated and that these requirements “involve all the ecological needs which are deemed necessary to ensure the conservation of the habitat types and species, including their relations with the physical environment (air, water, soil, vegetation, etc.)”.
- 1.2.6. At section 3.5 the guidance states, in relation to deterioration and disturbance of habitats or species:
- “Deterioration and disturbance should be assessed against the conservation objectives of the site and the conservation condition of the species and habitat types present in the site using the same criteria as for the Article 6(3) procedure. This notion should be interpreted in a dynamic way, according to the evolution of the conservation condition of the habitat or of the species in that site.”*
- 1.2.7. Section 4.5.2 sets out that in determining what may constitute a likely ‘significant’ effect one should take into account the conservation objectives for the site and other relevant baseline information. In the second paragraph of this section of the document it is stated:
- “In this regard, the conservation objectives of a site as well as prior or baseline information about it can be very important in more precisely identifying conservation sensitivities.”*
- 1.2.8. With regard to an assessment of the effects of a plan / project on the integrity of a site, the ‘integrity of the site’ is defined at Section 4.6.4 as:
- “... the coherent sum of the site’s ecological structure, function and ecological processes, across its whole area, which enables it to*

sustain the *habitats*, complex of habitats and/or populations of species for which the site is designated.”

- 1.2.9. The guidance is clear, within the text box on page 58, that an assessment as to the implications of the plan / project on the integrity of the site should be limited to an assessment against the site’s conservation objectives:

“The integrity of the site involves its constitutive characteristics and ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the habitats and species for which the site has been designated and the site’s conservation objectives.”

- 1.2.10. Section 5 of the document deals with Article 6(4) of the Habitats Directive.

Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission, 2001)

- 1.2.11. This document, published by the European Commission in 2001, gives guidance on carrying out and reviewing those assessments required under Article 6(3) and (4) of the Habitats Directive. It is provided as supplementary guidance and does not over-ride or replace any of that set out within ‘*Managing Natura 2000*’ (European Commission, 2000) which as stated at page 6 of the document, “*is the starting point for the interpretation of the key terms and phrases contained in the Habitats Directive*”. The guidance provided is not mandatory and it is clearly set out that its use is “*optional and flexible*” and that it is for “*Member States to determine the procedural requirements deriving from the directive*”.
- 1.2.12. The guidance sets out the key stages in following the tests contained within the Habitats Directive. Pertinent to an assessment under Regulation 63, stages one and two are relevant. Stage one is the screening stage assessing the likelihood of a plan / project resulting in a significant effect upon the European site. The second comprises the Appropriate Assessment.
- 1.2.13. Section 3.2.4 is concerned with Appropriate Assessment and specifically, the assessment against the Conservation Objectives of the European site. Box 9 provides a list of five example Conservation Objectives for differing broad habitat types. One such example, that for a coastal site, taken from Box 9 is provided below:

“to maintain the status of the European features of this coastal site in favourable condition, allowing for natural change. Features include coastal shingle vegetation and lagoons (within a candidate special area of conservation (SAC), which is also an SPA).”

Internal Guidance to decisions on ‘Site Integrity’: A framework for provision of advice to competent authorities (English Nature, 2004)

- 1.2.14. Natural England (English Nature at the time) produced an internal guidance document on the provision of advice to competent authorities regarding the concept of ‘site integrity’ in undertaking an Appropriate Assessment.

- 1.2.15. This guidance sets out a definition for integrity. It states that integrity is considered at the site level and gives the following definition (taken from PPG9):

“The coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and / or levels of populations of the species for which it was classified”.

- 1.2.16. Integrity is further defined within section 3.0 where it is stated that:

“In a dynamic context ‘integrity’ can be considered as a site having a sense of resilience and ability to evolve in ways that are favourable to conservation.”

- 1.2.17. The need to maintain or restore the designated site to favourable conservation status is dealt with in the final paragraph of section 3.0. Natural England quotes guidance issued jointly by the Environment Agency, English Nature and Countryside Council for Wales.

- 1.2.18. The guidance provides a checklist within section 4.1, for assessing the likelihood of an adverse effect on integrity occurring as a result of the proposed plan / project. It is stated that if the answer to all of the questions posed within the checklist is “yes” then it is reasonable to conclude that there will be no adverse effect upon integrity. In the event that one or more of the answers is no, then the guidance suggests a series of further site-specific factors, listed at 4.2 – 4.7.

Common Standards Monitoring (JNCC, 2004)

- 1.2.19. Common Standards Monitoring (CSM) is a means by which condition objectives for habitats, species, or other features of designated sites (e.g. SSSIs and SPAs) are set based on key attributes of the features.
- 1.2.20. JNCC and the country Conservation Agencies (e.g. Natural England) developed guidance on the setting and assessing of condition objectives, as required under the Birds and Habitats Directives and set out a framework for this in 1999. This framework is provided in the form of CSM guidance which comprises a suite of documents including an ‘*Introduction to the Guidance Manual on Common Standards Monitoring*’ and several species / habitat specific documents. The Guidance Manual covers various relevant concepts and terms. It also provides a background to the setting of conservation objectives and sets out the desired approach to setting targets, monitoring, management and reporting on conservation measures in designated sites.
- 1.2.21. The Guidance Manual and CSM guidance for individual site attributes (e.g. its bird or reptile interest) set out specific criteria regarding the identification of interest features, targets and methods of assessment. There is in-built flexibility and allowances for ‘judgements to be made’ when assessing, for example, favourable condition.
- 1.2.22. It is understood that Natural England applies the CSM approach to European designated sites through an assessment of the SSSI unit condition. This is undertaken on a cycle of approximately six years. The

assessment does not directly relate to the Conservation Objectives of the European site but provides a tool for tailoring future management of the SSSI such that favourable condition of the interest features can be maintained or restored as appropriate.

Guidance document on Article 6(4) of the 'Habitats Directive' (European Commission, 2007)

- 1.2.23. This document, published by the European Commission in 2007, is intended to provide clarification on key terms / concepts as referred to within 'Managing Natura 2000 Sites' and replaces the section on Article 6(4) within that earlier document.
- 1.2.24. The document covers the concepts of 'Alternative Solutions', 'Imperative Reasons of Overriding Public Interest', 'Compensation Measures', 'Overall Coherence' and the 'Opinion of the Commission'.
- 1.2.25. With regard to ensuring the quality of an Appropriate Assessment, and to define exactly what needs to be compensated, it is stated at Section 1.3 that:
- “Assessment procedures of plans or projects likely to affect Natura 2000 sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity.”*
- 1.2.26. The need to use information contained within the Natura 2000 Standard Data Form, in tandem with the site's Conservation Objectives when undertaking an Appropriate Assessment is specifically referred to (under the second hyphenated point at Section 1.3 on page 5).
- 1.2.27. Section 1.3.2 gives guidance on the application of Article 6(4) in respect of reasons of overriding public importance and Section 1.4.1 gives guidance on the application of Article 6(4) in respect of compensatory measures.

Habitats regulations assessments: protecting a European site: How a competent authority must decide if a plan or project proposal that affects a European site can go ahead

- 1.2.28. The most up-to-date guidance on HRA (for England and Wales) is provided by the updated HRA guidance titled "*Habitats regulations assessments: protecting a European site: How a competent authority must decide if a plan or project proposal that affects a European site can go ahead*" (hereinafter "HRA Guidance 2021")². This guidance is available on the GOV.UK website and was published in February 2021.
- 1.2.29. This HRA Guidance 2021 describes the following stages of the assessment process.

² <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site#follow-hra-principles>

- 1) *“Screening - to check if the proposal is likely to have a significant effect on the site’s conservation objectives. If not, you do not need to go through the appropriate assessment or derogation stages.*
- 2) *Appropriate assessment - to assess the likely significant effects of the proposal in more detail and identify ways to avoid or minimise any effects.*
- 3) *Derogation - to consider if proposals that would have an adverse effect on a European site qualify for an exemption.”*

1.2.30. In accordance with the HRA Guidance 2021, the Local Planning Authority (acting as Competent Authority under the Habitats Regulations) will need to:

- understand the conservation objectives for the relevant European site affected - these describe the ecological reasons for its protection (see Section 5 and Annex 6 of this sHRA).
- use these databases to find out about existing threats or pressures on the site - this can include the effects of any unregulated activities or the effects of permissions given in the past (see Section 6 and Annexes 6 and 7 of this sHRA).
- consider all possible effects of the proposal, at every phase, on the designated features of the site - include impacts that are direct and indirect, temporary and permanent (see Section 6 of this sHRA)
- consider possible combined effects on the site with other plans and projects (see Section 6 of this sHRA).
- make judgements based on the facts of the individual situation and the ecological condition of the site’s features (see Section 6 of this sHRA).
- use the best available objective and scientific information to make confident decisions.
- work with the proposer to find a way to allow projects or adopt plans while still protecting sites, if possible.
- ask for information from the proposer that’s proportionate, for example only ask for the information or evidence you need to meet the regulations.
- consider the advice of the relevant SNCB.
- keep a detailed written record of the HRA and give clear reasons and evidence for your decisions.
- make sure the assessment is thorough and complete with clear and precise conclusions.

1.2.31. The HRA Guidance 2021 confirms that a precautionary approach to decisions should be taken at each stage of the HRA process. It is stated that, for example:

- *“If the risk of a proposal having a significant effect on the conservation objectives of a European site at stage 1: screening cannot be ruled out then an appropriate assessment must be carried out;*
- *If all reasonable scientific doubt of an adverse effect on a site’s integrity at stage 2: appropriate assessment cannot be ruled out then the proposal must be refused unless an exemption (stage 3: derogation) is justified.”*

1.3. Planning Policy

National Planning Policy Framework (NPPF) and ODPM / DEFRA Circular (ODPM / DEFRA, 2005)

- 1.3.1. Paragraphs 174 and 181 of the National Planning Policy Framework (July 2021) are of direct relevance. Paragraph 174 makes reference to protecting and enhancing sites of biodiversity value “*in a manner commensurate with their statutory status or identified quality in the development plan*”. Paragraph 181 asserts that potential SPAs, possible SACs, listed or proposed Ramsar sites and sites providing compensatory measures for adverse effects should be afforded the same level of protection as classified SPAs and designated SACs (referred to in the NPPF as ‘habitats sites’).
- 1.3.2. Guidance on the determination of whether an effect on a European designated site is likely to be significant, together with the scope of Appropriate Assessments and ascertaining the effect on the integrity, was previously provided within Circular 06/2005 “*Biodiversity and geographical conservation – statutory obligations and their impact within the planning system*” (DEFRA). The Circular originally accompanied Planning Policy Statement 9 (PPS9) and is referenced in the NPPF at footnote 61. Whilst Circular 06/2005 provides guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system, the most up-to-date guidance on HRA (for England and Wales) is provided by the updated HRA Guidance of Feb 2021 (discussed above).
- 1.3.3. Paragraph 182 of the updated NPPF (July 2021) states that:

“The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site”.

ANNEX 2

Key Terms and Concepts Relevant to the Tests Contained within the Habitats Regulations

1. KEY TERMS AND CONCEPTS RELEVANT TO THE TESTS CONTAINED WITHIN THE HABITATS REGULATIONS

- 1.1. The application of the Habitats Regulations when deciding to grant a consent/permission for a plan or project has several individual steps but two main stages.
- 1.2. The first main stage of the process is, in accordance with Regulation 63(1), to ascertain whether, either alone or in combination, the plan/project is likely to give rise to any significant effects on the European site ("the likely significance test"). This is essentially a broad sieving stage, whereby if it can be shown that no significant effects are likely, then a consent can safely be granted without the need to move to the second main stage. If conversely the plan or project is likely to have a significant effect or it cannot be determined with the required level of certainty whether an effect would arise then the second main stage is triggered and an appropriate assessment should be undertaken. In line with the HRA Guidance 2021, the test at the sieving stage should be undertaken in view of the conservation objectives of the European site, on the basis that a plan or project which is likely to undermine a site's conservation objectives, must be likely to have a significant effect upon it.
- 1.3. The second main stage (Regulation 63(5), where necessary, is to assess the implications of the plan/project on the integrity of the European site, again in view of a site's conservation objectives. This second main stage of the process (appropriate assessment or "the integrity test") is a more detailed and thorough examination of the proposals and the impacts on the European site.
- 1.4. In the event that in undertaking the appropriate assessment the competent authority cannot conclude that the plan/project will not have an adverse effect on the integrity of a European site, the plan/project may still be consented where the competent authority is satisfied that, there being no alternative solutions, the plan/project must be carried out for imperative reasons of over-riding public interest. This is set out at Regulation 64 of the Habitats Regulations.
- 1.5. Regulation 68 provides that where a project is agreed to, notwithstanding a negative assessment, the appropriate authority must secure that any necessary compensatory measures are taken to ensure that the overall coherence of the NSN is protected.

Defining "Integrity"

- 1.6. The HRA Guidance 2021 states that:

"The integrity of the site will be adversely affected if a proposal could, for example:

- *destroy, damage or significantly change all or part of a designated habitat*
- *significantly disturb the population of a designated species, for example, its breeding birds or hibernating bats*
- *harm the site's ecological connectivity with the wider landscape, for example, harm a woodland that helps to support the designated species from a nearby European site*

- *harm the site’s ecological function, or its ability to survive damage, and reduce its ability to support a designated species*
- *change the site’s physical environment, for example, by changing the chemical makeup of its soil, increasing the risk of pollution or changing the site’s hydrology*
- *restrict access to resources outside the site that are important to a designated species, for example, food sources or breeding grounds*
- *prevent or disrupt restoration work, or the potential for future restoration, if it undermines the site’s conservation objectives”*

1.7. Further useful guidance is provided within the “Managing Natura 2000 guidance document¹ which contains guidance as to the meaning of "integrity" for the purpose of addressing the provision of Article 6 of the Habitats Directive. It states at section 4.6.4 that:

“The ‘integrity of the site’ can be usefully defined as the coherent sum of the site’s ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and / or populations of the species for which the site is designated.”

1.8. The text box at the foot of page 47 of the Managing Natura 2000 guidance document goes on to state:

“The integrity of the site involves its constitutive characteristics and ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the habitats and species for which the site has been designated and the site’s conservation objectives.”

The term ‘Conservation Objectives’

1.9. Amended regulation 3A of the Habitats Regulations states that in the Habitats Regulations, any reference to "the requirements of the Directives" is to be construed as if the objective of the Directives included the “management objectives” for the national site network. The management objectives for the national site network are set out in Amended Regulation 16A.

1.10. Amended Regulation 16A of the Habitats Regulations states:

1) *“The appropriate authority must, in co-operation with any other authority having a corresponding responsibility, manage, and where necessary adapt, the national site network, so far as it consists of European sites, with a view to contributing to the achievement of the management objectives of the national site network.*

2) *The management objectives of the national site network are—*

- a) *to maintain at, or where appropriate restore to, a favourable conservation status in their natural range (so far as it lies in the United Kingdom’s territory, and so far as is proportionate)—*
- i. *the natural habitat types listed in Annex I to the Habitats Directive;*
 - ii. *the species listed in Annex II to that Directive whose natural range includes any part of the United Kingdom’s territory;*

¹ Managing Natura 2000 Sites – The provisions of Article 6 of the habitats Directive 92/43/EEC (2019)

- b) *to contribute, in their area of distribution, to ensuring the survival and reproduction of—*
 - i. *the species of birds listed in Annex I to the new Wild Birds Directive which naturally occur in the United Kingdom’s territory;*
 - ii. *regularly occurring migratory species of birds not listed in that Annex which naturally occur in the United Kingdom’s territory;*
 - c) *to contribute, to securing compliance with the requirements of Article 2 of the new Wild Birds Directive for the purposes of the duty in regulation 9(1) in relation to the species of birds in paragraph (b) within their area of distribution.*
- 3) *In complying with the obligation in paragraph (1), the appropriate authority must have regard—*
- a) *in relation to any European sites which are not of a kind mentioned in regulation 8(1)(d), to the considerations mentioned in paragraph (4);*
 - b) *in relation to European sites of a kind mentioned in regulation 8(1)(d), to the considerations mentioned in paragraph (5).*
- 4) *The considerations mentioned in paragraph (3)(a) are—*
- a) *the importance of the sites for meeting the objective in paragraph (2)(a);*
 - b) *the importance of the sites for the coherence of national site network;*
 - c) *the threats of degradation or destruction (including deterioration and disturbance of protected features) to which the sites are exposed.*
- 5) *The considerations mentioned in paragraph (3)(b) are—*
- a) *the importance of the sites for meeting the objectives in paragraph 2(b) and (c);*
 - b) *in the case of migratory species, the importance of their breeding, moulting and wintering areas and staging points along their migration routes;*
 - c) *the importance of the sites for the coherence of national site network;*
 - d) *the threats of degradation or destruction (including deterioration and disturbance of protected features) to which the sites are exposed.”*

1.11. The formal European Site Conservation Objectives for SPAs and SACs in England are produced by Natural England.

Assemblages

1.12. “Assemblage” is not a term or a concept used in the Directive. Section 14 of the Introduction to the CSM describes what may constitute an assemblage, with specific reference to SSSIs, SPAs and Ramsar sites. Under the title, “What is an assemblage?”, the following information is given:

“ASSIs/SSSIs, SPAs and Ramsar sites may each be notified because of the presence of important assemblages of species. This might seem straightforward, but in the context of species features two situations can be envisaged:

1. *A colony of different species all occurring / living together, where the total number of individuals is the key aspect of the interest on the site (e.g. more than 20,000 seabirds on a SPA site).*
2. *A number of characteristic species which together form the feature and usually share similar ecological or habitat requirements (e.g. the co-occurrence of woodland or upland bird species, or heathland invertebrates).*

The term 'assemblage' can also be used in a third, functional, way; when there are a number of features which co-exist, yet are individually notified (i.e. they are features in their own right). While it may be possible to assess them using the same or very similar attributes, these species must be assessed as individual features independently of any assemblage of which they may also form a part (e.g. under scenario 1)."

- 1.13. Thus the quality of the 'assemblage' can be defined by the mix of species (assemblage) or the total number of characteristic species (aggregation).

European Marine sites

- 1.14. European Marine Sites are not statutorily designated sites in their own right. They are composite sites, comprising the marine elements of SACs, SPAs and Ramsar sites. EMSs are commonly described as 'management units' for those (European / Ramsar) sites which extend beyond the underpinning SSSI / Area of Special Scientific Interest (ASSI – in Northern Ireland) designation boundaries, which typically extend only to the mean low water mark. In other words, an EMS designation confers no additional protection to a site nor does it change the legal tests to be applied in relation to areas which are separately protected.

Application of the "Precautionary Principle"

- 1.15. Relevant case law makes it clear that in applying the relevant tests of the Habitats Regulations, there is a need for certainty (or the absence of reasonable scientific doubt), both regarding the nature and extent of predicted effects on integrity and in relation to the effectiveness of any preventative measures relied upon. As discussed previously, The HRA Guidance 2021 confirms that a precautionary approach to decisions should be taken at each stage of the HRA process.
- 1.16. The document titled "Communication from the Commission on the Precautionary Principle" (2000) provides useful guidance in relation to the application of the Precautionary Principle in relation to European sites issues. Paragraph 6, sets out the six key matters for consideration when applying the Precautionary Principle. Paragraph 6 states:

"Where action is deemed necessary, measures based on the precautionary principle should be, inter alia:

- *proportional to the chosen level of protection,*
- *non-discriminatory in their application,*
- *consistent with similar measures already taken,*
- *based on an examination of the potential benefits and costs of action or lack of action (including, where appropriate and feasible, an economic cost/benefit analysis),*

- *subject to review, in the light of new scientific data, and*
- *capable of assigning responsibility for producing the scientific evidence necessary for a more comprehensive risk assessment."*

1.17. Under these bulleted points, the guidance gives specific definitions in relation to each of the above at pages 4 and 5, with further detail provided within section 6.

1.18. In accordance with the Communication from the Commission it is clear that when they are deemed necessary, risk reduction measures should be proportionate and must not aim at zero risk. It is stated at section 6.3.1 of the Communication from the Commission that:

"The measures envisaged must make it possible to achieve the appropriate level of protection. Measures based on the precautionary principle must not be disproportionate to the desired level of protection and must not aim at zero risk, something which rarely exists. However, in certain cases, an incomplete assessment of the risk may considerably limit the number of options available to the risk managers."

1.19. With reference to not aiming "at zero risk" the judgement of the Appeal Court in the case of *Morge vs Hampshire County Council* [2010] EWCA Civ 608 is relevant. Lord Justice Ward considered what the level of disturbance was required in addressing Article 12(1)(b) and at paragraph 35 he described the level or risk of threatened habitat and species stating that:

"... It must be certain, that is to say, identifiable. It must be real, not fanciful."

1.20. This is understood to mean that for the level of risk to be real and identifiable, it must be based upon objective evidence to substantiate the risk.

1.21. The judgment in the case of *Boggis v Natural England*² also assists in determining when it would be appropriate to invoke the precautionary principle and conclude that the objective information needed, is simply not available.

1.22. At paragraph 37 of the judgment, it is stated:

"...a claimant who alleges that there was a risk which should have been considered by the authorising authority so that it could decide whether that risk could be "excluded on the basis of objective information", must produce credible evidence that there was a real, rather than a hypothetical, risk which should have been considered."

1.23. Also of relevance is the case of *R (Champion) v. North Norfolk District Council*³, where at paragraph 41, Lord Carnwath makes it clear that Article 6(3) does not require absolute certainty of no adverse effect and it is ultimately an issue of judgment for the decision maker. It is stated:

"As the court itself indicated in Waddenzee the context implies a high standard of investigation. However, as Advocate General Kokott said in Waddenzee [2005] All ER (EC) 353, para 107:

² [2009] EWCA Civ 1061

³ [2015] UKSC 52, [2015] 1 WLR 3710,

“The necessary certainty cannot be construed as meaning absolute certainty since that is almost impossible to attain. Instead, it is clear from the second sentence of article 6(3) of the Habitats Directive that the competent authorities must take a decision having assessed all the relevant information which is set out in particular in the appropriate assessment. The conclusion of this assessment is, of necessity, subjective in nature. Therefore, the competent authorities can, from their point of view, be certain that there will be no adverse effects even though, from an objective point of view, there is no absolute certainty”

In short, no special procedure is prescribed, and, while a high standard of investigation is demanded, the issue ultimately rests on the judgment of the authority.”

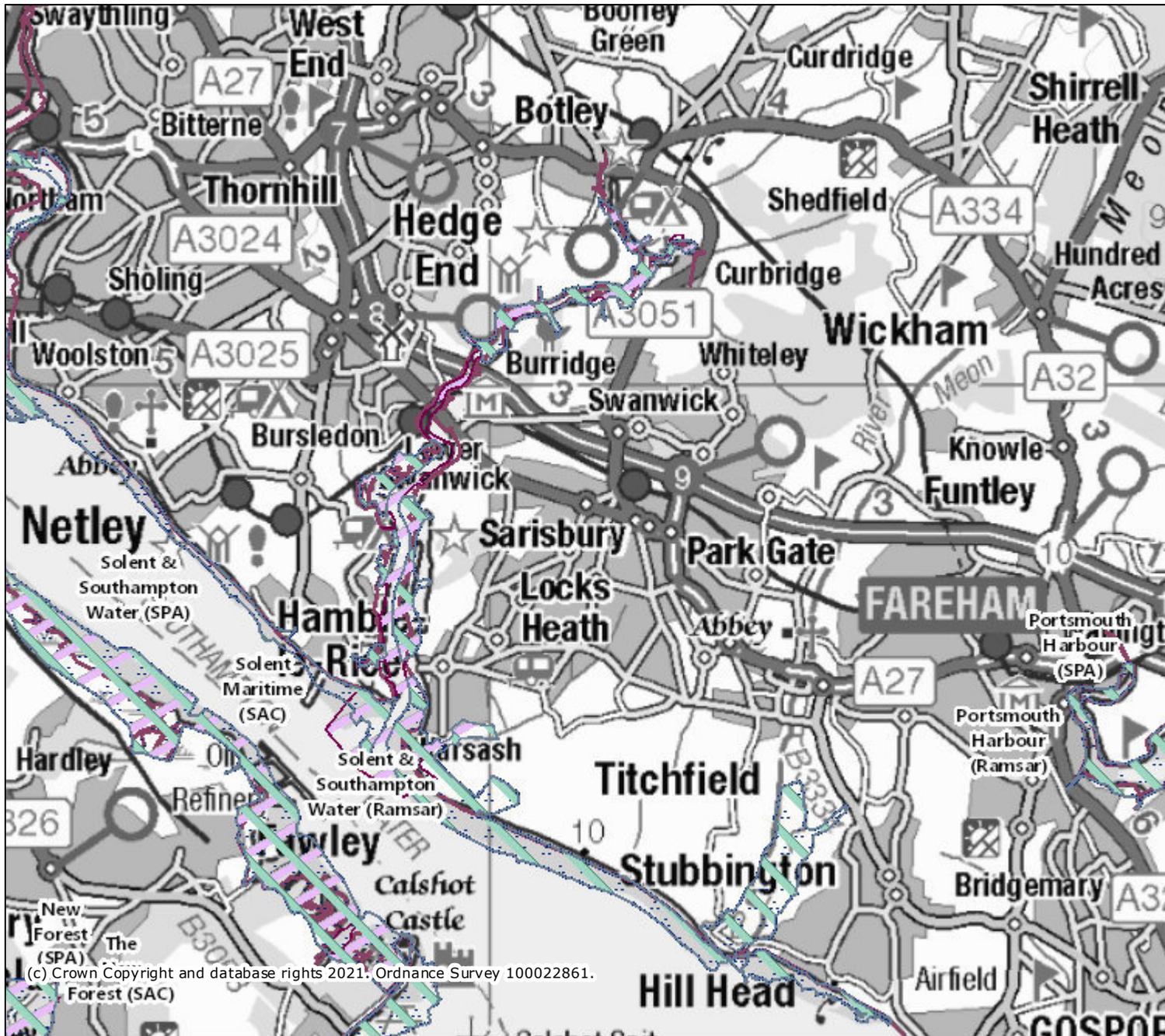
Summary conclusions

- 1.24. Having regard to the relevant legislation and supporting guidance it is clear that the assessment at Regulation 63 of the Habitats Regulations, is a two stage process, the first being the ‘likely significance’ test stage, the second being the ‘integrity’ test.
- 1.25. The Competent Authority should not grant a consent or other permission unless it can be ascertained that the plan / project will not adversely affect the integrity of relevant European Sites. The decision taker must be certain of this, i.e. reach a judgment beyond reasonable scientific doubt in line with the precautionary principle. This test must be applied in light of the Conservation Objectives which have formally been adopted for each of the European Sites.
- 1.26. It is also necessary to note the Holohan judgment. That judgment emphasises that it may be necessary to look wider than the listed interest features when assessing against integrity. In that case the ECJ stated:

“Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that an ‘appropriate assessment’ must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site.”
- 1.27. This judgment underlines the importance of the assessment and ultimate judgment being related to the conservation objectives of the site.
- 1.28. It is important to recognise that the species for which sites are protected (at any level) do not recognise arbitrary boundaries and for many species / groups they will be reliant on different habitats or areas, in parts of their natural range for different stages of their life cycle, or at different times of year (e.g. as a response to seasonal climatic changes). A protected site may serve a ‘protective function’ for only part, or all of a species life cycle.

ANNEX 3

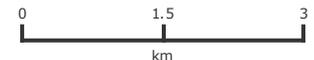
Information downloaded from MAGIC



Legend

-  Ramsar Sites (England)
-  Special Areas of Conservation (England)
-  Possible Special Areas of Conservation (England)
-  Special Protection Areas (England)
-  Potential Special Protection Areas (England)

Projection = OSGB36
 xmin = 431200
 ymin = 98500
 xmax = 471500
 ymax = 117800



Map produced by MAGIC on 14 December, 2021.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

ANNEX 4

Portsmouth Harbour SPA Data Form, Ramsar
Information Sheet and Conservation Objectives

STANDARD DATA FORM for sites within the 'UK national site network of European sites'

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the [Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 \(2011/484/EU\)](#).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the [SPA homepage](#) and [SAC homepage](#) on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

<https://jncc.gov.uk/>



NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE UK9011051
SITENAME Portsmouth Harbour

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- [1. SITE IDENTIFICATION](#)
- [2. SITE LOCATION](#)
- [3. ECOLOGICAL INFORMATION](#)
- [4. SITE DESCRIPTION](#)
- [5. SITE PROTECTION STATUS AND RELATION WITH CORINE BIOTOPES](#)
- [6. SITE MANAGEMENT](#)

1. SITE IDENTIFICATION

1.1 Type A	1.2 Site code UK9011051	Back to top
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1.3 Site name

Portsmouth Harbour

1.4 First Compilation date 1995-02	1.5 Update date 2015-12
----------------------------------------------	-----------------------------------

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee
Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:

1.7 Site indication and designation / classification dates

Date site classified as SPA:	1995-02
National legal reference of SPA designation	Regulations 12A and 13-15 of the Conservation Habitats and Species Regulations 2010, (http://www.legislation.gov.uk/uksi/2010/490/contents/made) as amended by The Conservation of Habitats and Species (Amendment) Regulations 2011 (http://www.legislation.gov.uk/uksi/2011/625/contents/made).

2. SITE LOCATION

2.1 Site-centre location [decimal degrees]:

Longitude

-1.125555556

Latitude

50.82805556

2.2 Area [ha]:

1249.6

2.3 Marine area [%]

98.4

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code

Region Name

UKJ3	Hampshire and Isle of Wight
------	-----------------------------

2.6 Biogeographical Region(s)

Atlantic (100.0
%)

3. ECOLOGICAL INFORMATION

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3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species			Population in the site							Site assessment				
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A B C D		A B C	
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A675	Branta bernicla bernicla			w	2847	2847	i		G	B		C	
B	A672	Calidris alpina alpina			w	5123	5123	i		G	C		C	
B	A616	Limosa limosa islandica			w	31	31	i		G	C		C	
B	A069	Mergus serrator			w	87	87	i		G	C		C	

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are

- deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover
N10	1.0
N03	14.0
N02	85.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: nutrient-rich,mud,neutral,sedimentary,alluvium,acidic 2 Terrestrial: Geomorphology and landscape: lowland,coastal 3 Marine: Geology: sedimentary,mud,gravel 4 Marine: Geomorphology: estuary,enclosed coast (including embayment),intertidal sediments (including sandflat/mudflat),islands,subtidal sediments (including sandbank/mudbank),lagoon

4.2 Quality and importance

ARTICLE 4.2 QUALIFICATION (79/409/EEC) Over winter the area regularly supports: Branta bernicla bernicla (Western Siberia/Western Europe) 0.9% of the population 5 year peak mean 1991/92-1995/96 Calidris alpina alpina (Northern Siberia/Europe/Western Africa) 1% of the population in Great Britain 5 year peak mean 1991/92-1995/96 Limosa limosa islandica (Iceland - breeding) 0.4% of the population in Great Britain 5 year peak mean 1991/92-1995/96 Mergus serrator (North-western/Central Europe) 0.9% of the population in Great Britain 5 year peak mean 1991/92-1995/96

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
H	F02		I
H	H02		B
H	M01		B
H	G01		I
H	M02		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): <http://publications.naturalengland.org.uk/category/6490068894089216>

<http://publications.naturalengland.org.uk/category/3212324>

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0				

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No, but in preparation
<input checked="" type="checkbox"/>	No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the [official European Union guidelines for the Standard Data Form](#) (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (<i>Spartinion maritimae</i>)	57
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with <i>Empetrum nigrum</i>	57
2150	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)	57
2160	Dunes with <i>Hippophya rhamnoides</i>	57
2170	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with <i>Juniperus</i> spp.	57
2330	Inland dunes with open <i>Corynephorus</i> and <i>Agrostis</i> grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	57
3150	Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion roburi-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representativity	57
B	Good representativity	57
C	Significant representativity	57
D	Non-significant presence representativity	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code
-----	----------------------------------------------------------------------	------------------

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Scree, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic resources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

European Site Conservation Objectives for Portsmouth Harbour Special Protection Area Site Code: UK9011051



With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)

A069 *Mergus serrator*; Red-breasted merganser (Non-breeding)

A149 *Calidris alpina alpina*; Dunlin (Non-breeding)

A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)

This is a European Marine Site

This SPA is a part of the Solent Maritime European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 21 February 2019 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

ANNEX 5

Solent and Southampton Water SPA Data Form,
Ramsar Information Sheet and Conservation
Objectives

**EC Directive 79/409 on the Conservation of Wild Birds:
Special Protection Area (SPA)**

Name: Solent and Southampton Water

Unitary Authority/County: Hampshire County Council, New Forest District Council, Test Valley Borough Council, Southampton City Council Unitary Authority, Eastleigh Borough Council, Fareham District Council and Isle of Wight Council Unitary Authority.

Consultation proposal: The Solent and Southampton Water SPA site comprises a series of estuaries and adjacent coastal habitats important for breeding gulls and terns and wintering waterfowl. The following SSSIs; Lymington River Reedbeds, Sowley Pond, Hythe to Calshot Marshes, Eling and Bury Marshes, Lower Test Valley, Lincegrove and Hacketts Marshes and Titchfield Haven, and parts of Yar Estuary, Hurst Castle and Lymington River Estuary, North Solent, Lee-on-Solent to Itchen Estuary, Upper Hamble Estuary and Woods, Newtown Harbour, Thorness Bay, Medina Estuary, King's Quay Shore, Ryde Sands and Wootton Creek, Brading Marshes to St Helen's Ledges, Whitecliff Bay and Bembridge Ledges have been recommended as a Special Protection Area because of their European ornithological importance.

Status: Classified 1 October 1998.

Boundary of SPA: SPA boundary is coincident with Lymington River Reedbeds SSSI, Sowley Pond SSSI, Hythe to Calshot Marshes SSSI and Titchfield Haven SSSI and includes parts of the other SSSI listed above. See map for clarification of the SPA boundary.

European ornithological importance of SPA

Solent and Southampton Water SPA is of European importance because:

a) The site qualifies under article 4.1 of the Birds Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain population of a species listed in Annex 1 in any season:

Annex 1 species	5 yr peak mean	Count years
Mediterranean Gull <i>Larus melanocephalus</i>	2 pairs (8.2-13.9% GB)	1994-1998
Sandwich tern <i>Sterna sandvicensis</i>	231 pairs (1.7 % GB)	1993-1997
Common tern <i>Sterna hirundo</i>	267 pairs (2.2 % GB)	1993-1997
Little tern <i>Sterna albifrons</i>	49 pairs (2 % GB)	1993-1997
Roseate tern <i>Sterna dougalli</i>	2 pairs (3.1 % GB)	1993-1997

Bird Numbers from: JNCC Seabird Colony Register

b) The site qualifies under article 4.2 of the Birds Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographic population of a regularly occurring migratory species (other than those listed in Annex 1) in any season.

Non- Annex 1 migratory bird species	5 yr peak mean from -1992/93-1996/97
Dark-bellied brent geese <i>Branta bernicla bernicla</i>	7506 ¹ (2.5% W Siberia/W Europe)
Teal <i>Anas crecca</i>	4,400 ¹ (1.1% NW Europe)
Ringed plover <i>Charadrius hiaticula</i>	552 ¹ (1.1% Europe/NW Africa)
Black-tailed godwit <i>Limosa limosa</i>	1125 ¹ (1.6 % Iceland)

Bird Numbers from: WeBS Wildfowl & Waders database

Unit of population size: I- individual birds wintering

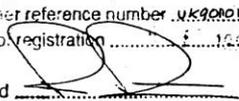
c) The site is used regularly by over 20,000 waterfowl (waterfowl as defined by the Ramsar Convention) or 20,000 seabirds in any season.

5 yr peak mean from 1992/93- 1996/97	
51,361 ¹	(21,401 wildfowl 29,960 waders)

Unit of population size: I- individual birds wintering

Additional non-qualifying interest

An outstanding assemblage of wintering and passage birds are dependent on wetland habitats within the site, including the following Annex 1 species not mentioned previously: red-throated diver *Gavia stellata*, black-throated diver *G. arctica*, great northern diver *G. immer*, Slavonian grebe *Podiceps auritus*, little egret *Egretta garzetta*, hen harrier *Circus cyaneus*, marsh harrier *Circus aeruginosus*, merlin *Falco columbarius*, peregrine *Falco peregrinus* and short-eared owl *Asio flammeus*.

This citation / map relates to a site entered in
 the Register of European sites for Great Britain.
 Register reference number UK900051
 Date of registration 1998
 Signed 
 on behalf of the Secretary of State for the Environment

STANDARD DATA FORM for sites within the 'UK national site network of European sites'

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the [Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 \(2011/484/EU\)](#).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the [SPA homepage](#) and [SAC homepage](#) on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

<https://jncc.gov.uk/>



NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE UK9011061
SITENAME Solent and Southampton Water

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- [1. SITE IDENTIFICATION](#)
- [2. SITE LOCATION](#)
- [3. ECOLOGICAL INFORMATION](#)
- [4. SITE DESCRIPTION](#)
- [5. SITE PROTECTION STATUS AND RELATION WITH CORINE BIOTOPES](#)
- [6. SITE MANAGEMENT](#)

1. SITE IDENTIFICATION

1.1 Type A	1.2 Site code UK9011061	Back to top
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1.3 Site name

Solent and Southampton Water

1.4 First Compilation date 1998-10	1.5 Update date 2015-12
----------------------------------------------	-----------------------------------

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee
Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough
PE1 1JY
Email:

1.7 Site indication and designation / classification dates

Date site classified as SPA:	1998-10
National legal reference of SPA designation	Regulations 12A and 13-15 of the Conservation Habitats and Species Regulations 2010, (http://www.legislation.gov.uk/uksi/2010/490/contents/made) as amended by The Conservation of Habitats and Species (Amendment) Regulations 2011 (http://www.legislation.gov.uk/uksi/2011/625/contents/made).

2. SITE LOCATION

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2.1 Site-centre location [decimal degrees]:

Longitude
-1.525833333

Latitude
50.74027778

2.2 Area [ha]:

5401.12

2.3 Marine area [%]

59.3

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code **Region Name**

UKJ3	Hampshire and Isle of Wight
------	-----------------------------

2.6 Biogeographical Region(s)

Atlantic (100.0
%)

3. ECOLOGICAL INFORMATION

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3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species			Population in the site							Site assessment				
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A B C D	A B C		
						Min	Max				Pop.	Con.	Iso.	Glo
B	A052	Anas crecca			w	4400	4400	i		G	B		C	
B	A675	Branta bernicla bernicla			w	7506	7506	i		G	B		C	
B	A137	Charadrius hiaticula			w	552	552	i		G	C		C	
B	A176	Larus melanocephalus			r	2	2	p		G	A		C	
B	A616	Limosa limosa islandica			w	1125	1125	i		G	A		C	
B	A195	Sterna albifrons			r	49	49	p		G	B		C	
B	A192	Sterna dougallii			r	2	2	p		G	B		A	
B	A193	Sterna hirundo			r	267	267	p		G	B		C	
B	A191	Sterna sandvicensis			r	231	231	p		G	C		C	

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public

access enter: yes

- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

3.3 Other important species of flora and fauna (optional)

Species					Population in the site				Motivation					
Group	CODE	Scientific Name	S	NP	Size		Unit	Cat.	Species Annex		Other categories			
					Min	Max		C R V P	IV	V	A	B	C	D
B	WATR	Waterbird assemblage			51361	51361	i						X	

- **Group:** A = Amphibians, B = Birds, F = Fish, Fu = Fungi, I = Invertebrates, L = Lichens, M = Mammals, P = Plants, R = Reptiles
- **CODE:** for Birds, Annex IV and V species the code as provided in the reference portal should be used in addition to the scientific name
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Unit:** i = individuals, p = pairs or other units according to the standard list of population units and codes in accordance with Article 12 and 17 reporting, (see [reference portal](#))
- **Cat.:** Abundance categories: C = common, R = rare, V = very rare, P = present
- **Motivation categories:** IV, V: Annex Species (Habitats Directive), A: National Red List data; B: Endemics; C: International Conventions; D: other reasons

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover
N05	10.2
N16	0.6
N03	18.2
N07	3.4
N04	2.8
N10	17.1
N02	47.7
Total Habitat Cover	100.00000000000001

Other Site Characteristics

1 Terrestrial: Soil & Geology: mud,acidic,alluvium,sedimentary,neutral 2 Terrestrial: Geomorphology and landscape: floodplain,coastal,lowland 3 Marine: Geology: sand,gravel,sedimentary,shingle 4 Marine: Geomorphology: open coast (including bay),lagoon,estuary,intertidal rock,enclosed coast (including

embayment), shingle bar, islands, intertidal sediments (including sandflat/mudflat) Ramsar Wetland
Types: Marine and coastal wetlands

4.2 Quality and importance

ARTICLE 4.1 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: Larus melanocephalus 15.4% of the GB breeding population 5 year peak mean, 1994-1998 Sterna albifrons (Eastern Atlantic - breeding) 2% of the GB breeding population 5 year peak mean, 1993-1997 Sterna dougallii (Europe - breeding) 3.1% of the GB breeding population 5 year peak mean, 1993-1997 Sterna hirundo (Northern/Eastern Europe - breeding) 2.2% of the GB breeding population 5 year peak mean, 1993-1997 Sterna sandvicensis (Western Europe/Western Africa) 1.7% of the GB breeding population 5 year peak mean, 1993-1997 ARTICLE 4.2 QUALIFICATION (79/409/EEC) Over winter the area regularly supports: Anas crecca (North-western Europe) 1.1% of the population 5 year peak mean, 1992/3-1996/7 Branta bernicla bernicla (Western Siberia/Western Europe) 2.5% of the population 5 year peak mean, 1992/3-1996/7 Charadrius hiaticula (Europe/Northern Africa - wintering) 1.2% of the population 5 year peak mean, 1992/3-1996/7 Limosa limosa islandica (Iceland - breeding) 1.7% of the population 5 year peak mean, 1992/3-1996/7 ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS Over winter the area regularly supports: 51361 waterfowl (5 year peak mean 1991/92-1995/96) Including: Branta bernicla bernicla , Anas crecca , Charadrius hiaticula , Limosa limosa islandica

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
H	G01		I
H	M01		B
H	M02		B
H	F02		I
H	H02		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]
H	A04		I
H	D05		I
H	A03		I
H	A02		I
H	B02		I
H	D05		I

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): <http://publications.naturalengland.org.uk/category/6490068894089216>

<http://publications.naturalengland.org.uk/category/3212324>

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK01	21.8	UK04	100.0		

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No, but in preparation
<input checked="" type="checkbox"/>	No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the [official European Union guidelines for the Standard Data Form](#) (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (<i>Spartinion maritimae</i>)	57
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with <i>Empetrum nigrum</i>	57
2150	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)	57
2160	Dunes with <i>Hippophya rhamnoides</i>	57
2170	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with <i>Juniperus</i> spp.	57
2330	Inland dunes with open <i>Corynephorus</i> and <i>Agrostis</i> grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	57
3150	Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion roburi-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representativity	57
B	Good representativity	57
C	Significant representativity	57
D	Non-significant presence representativity	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code
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4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Scree, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic resources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

Information Sheet on Ramsar Wetlands (RIS)

1. Name and address of the compiler of this form:**Joint Nature Conservation Committee**

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: RIS@JNCC.gov.uk

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DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 01 October 1998 / Updated: May 2005

3. Country:

UK (England)

4. Name of the Ramsar site:

Solent and Southampton Water

5. Map of site included:**a) hard copy** (required for inclusion of site in the Ramsar List): *yes -or- no***b) digital (electronic) format** (optional): Yes

6. Geographical coordinates (latitude/longitude):

50° 44' 25'' N

01° 31' 32'' W

7. General location:

Nearest town/city: Southampton

Solent and Southampton Water lies on the central south coast of England.

Administrative region: City of Portsmouth; City of Southampton; Hampshire; Isle of Wight

8. Elevation (average and/or max. & min.) (metres): **9. Area** (hectares): 5415

Min. No information available

Max. No information available

Mean No information available

10. Overview:

The area covered extends from Hurst Spit to Gilkicker Point along the south coast of Hampshire and along the north coast of the Isle of Wight. The site comprises of estuaries and adjacent coastal habitats including intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland, and grazing marsh. The diversity of habitats support internationally important numbers of wintering waterfowl, important breeding gull and tern populations and an important assemblage of rare invertebrates and plants.

11. Ramsar Criteria:

1, 2, 5, 6

12. Justification for the application of each Criterion listed in 11. above:

Ramsar criterion 1

The site is one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. It includes many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs.

Ramsar criterion 2

The site supports an important assemblage of rare plants and invertebrates. At least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site.

The higher plants *Orobanche purpurea* and *Spartina maritima* are considered vulnerable and endangered, respectively, in the GB Red Book.

The Mediterranean gull (*Larus melanocephalus*) is included in CITES Appendix I

Secretariat Comment: Criterion 2 requires to specify the scientific names of those mentioned species considered vulnerable, endangered or critically endangered. This need to be included in the next update.

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

51,343 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6

Species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species with peak counts in spring/autumn:

Species with peak counts in winter:

Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	1,240 individuals, representing an average of 2.6% of the population (5 year peak mean 1998/9-2002/3)
Dark-bellied brent goose, <i>Branta bernicla bernicla</i> ,	6,456 individuals, representing an average of 3.2% of the population (5 year peak mean 1998/9-2002/3)
Eurasian teal , <i>Anas crecca</i> , NW Europe	5,514 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)

More contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey Alerts report, which is updated annually. See <http://www.bto.org/survey/webs/webs-alerts-index.htm>.

13. Biogeography:

a) biogeographic region:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

14. Physical features of the site:

Soil & geology	acidic, neutral, shingle, sand, mud, alluvium, sedimentary
Geomorphology and landscape	lowland, island, coastal, floodplain, shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), estuary, lagoon, intertidal rock
Nutrient status	eutrophic
pH	no information
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Everton, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/everton.html) Max. daily temperature: 14.0° C Min. daily temperature: 7.0° C Days of air frost: 32.5 Rainfall: 763.7 mm Hrs. of sunshine: 1750.7

General description of the Physical Features:

No information available

15. Physical features of the catchment area:

No information available

16. Hydrological values:

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping

17. Wetland types

Marine/coastal wetland

Code	Name	% Area
D	Rocky shores	1.5
E	Sand / shingle shores (including dune systems)	12.1
G	Tidal flats	47.9
H	Salt marshes	18.5
J	Coastal brackish / saline lagoons	0.7
Sp	Saline / brackish marshes: permanent	14.9
Tp	Freshwater marshes / pools: permanent	3.7
Xf	Freshwater, tree-dominated wetlands	0.7

18. General ecological features:

The estuaries and harbours of the Solent are particularly sheltered and form the largest number and tightest cluster of small estuaries anywhere in Great Britain. The Solent and Isle of Wight system is notable for its large range and extent of different habitats.

The intertidal area is predominantly sedimentary in nature with extensive intertidal mud and sandflats within the sheltered harbours and areas of gravel and pebble sediments on more exposed beaches. These conditions combine to favour an abundant benthic fauna and green algae which support high densities of migrant and over-wintering wildfowl and waders. Eelgrass *Zostera* beds occur

discontinuously along the north shore of the Isle of Wight and in a few places along the northern shore of The Solent.

The Solent system supports a wide range of saltmarsh communities. Upper saltmarshes are dominated by sea purslane *Atriplex portulacoides*, sea plantain *Plantago maritima*, sea meadow grass *Puccinellia maritima* and sea lavender *Limonium vulgare*; locally thrift *Armeria maritima* and the nationally scarce golden samphire *Inula crithmoides* are abundant. Lower saltmarsh vegetation tends to be dominated by sea purslane, cord grass *Spartina* spp., glasswort *Salicornia* spp. and sea-blite *Suaeda maritima*. Cord-grasses dominate much of the saltmarsh in Southampton Water and in parts of the Solent and it was the original location of the introduction of *Spartina alterniflora* and subsequent hybridisation with the native species.

There are several shingle spits including Hurst spit, Needs Ore Point, Calshot spit and Newtown Harbour spits which support a characteristic shingle flora.

A range of grassland types lie inshore of the intertidal zone including unimproved species-rich neutral and calcareous grasslands, brackish grazing marsh systems and reed dominated freshwater marshes.

The brackish water lagoons associated with grazing marsh systems behind the seawalls, e.g. Keyhaven-Lymington, Gilkicker lagoon, and at Brading Marshes contain internationally important communities of rare and endangered invertebrates and plants.

19. Noteworthy flora:

Nationally important species occurring on the site.

Higher Plants.

Eleocharis parvula, *Geranium purpureum forsteri*, *Lotus angustissimus*, *Ludwigia palustris*, *Orobanche purpurea*, *Lamprothamnium papulosum*, *Spartina maritima* and *Zostera marina*.

20. Noteworthy fauna:

Birds

Species currently occurring at levels of national importance:

Species regularly supported during the breeding season:

Black-headed gull , <i>Larus ridibundus</i> , N & C Europe	6911 apparently occupied nests, representing an average of 5.4% of the GB population (Seabird 2000 Census)
Common tern , <i>Sterna hirundo hirundo</i> , N & E Europe	192 apparently occupied nests, representing an average of 1.8% of the GB population (Seabird 2000 Census)
Little tern , <i>Sterna albifrons albifrons</i> , W Europe	22 apparently occupied nests, representing an average of 1.1% of the GB population (Seabird 2000 Census)
Mediterranean gull , <i>Larus melanocephalus</i> , Europe	11 apparently occupied nests, representing an average of 10.1% of the GB population (Seabird 2000 Census) CITES Appendix I
Roseate tern , <i>Sterna dougallii dougallii</i> , W Europe	1 apparently occupied nests, representing an average of 1.9% of the GB population (Seabird 2000 Census)
Sandwich tern , <i>Sterna</i> <i>(Thalasseus) sandvicensis sandvicensis</i> , W Europe	268 apparently occupied nests, representing an average of 2.5% of the GB population (Seabird 2000 Census)

Species with peak counts in spring/autumn:

Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	58 individuals, representing an average of 9.7% of the GB population (5 year peak mean 1998/9- 2002/3)
Little egret , <i>Egretta garzetta</i> , West Mediterranean	115 individuals, representing an average of 6.9% of the GB population (5 year peak mean 1998/9- 2002/3)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	13 individuals, representing an average of 9.5% of the GB population (5 year peak mean 1998/9- 2002/3)
Species with peak counts in winter:	
Black-necked grebe , <i>Podiceps nigricollis</i> <i>nigricollis</i> , Europe, N Africa	3 individuals, representing an average of 2.5% of the GB population (5 year peak mean 1998/9- 2002/3)
Common shelduck , <i>Tadorna tadorna</i> , NW Europe	964 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9- 2002/3)
Dunlin , <i>Calidris alpina alpina</i> , W Siberia/W Europe	10417 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian curlew , <i>Numenius arquata arquata</i> , N. a. <i>arquata</i> Europe (breeding)	1766 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9- 2002/3)
Eurasian wigeon , <i>Anas penelope</i> , NW Europe	7907 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9- 2002/3)
Great cormorant , <i>Phalacrocorax carbo carbo</i> , NW Europe	247 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9- 2002/3)
Grey plover , <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering	1171 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9- 2002/3)
Little grebe , <i>Tachybaptus ruficollis ruficollis</i> , Europe to E Urals, NW Africa	105 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9- 2002/3)
Northern pintail , <i>Anas acuta</i> , NW Europe	359 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9- 2002/3)
Northern shoveler , <i>Anas clypeata</i> , NW & C Europe	267 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9- 2002/3)
Red-breasted merganser , <i>Mergus serrator</i> , NW & C Europe	142 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9- 2002/3)
Slavonian grebe , <i>Podiceps auritus</i> , Northwest Europe	12 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9- 2002/3)
Water rail , <i>Rallus aquaticus</i> , Europe	17 individuals, representing an average of 3.7% of the GB population (5 year peak mean 1998/9- 2002/3)

Species Information

Nationally important species occurring on the site.

Invertebrates.

Allomelita pellucida, Gammarus insensibilis, Nematostella vectensis, Arctosa fulvolineata, Aulonia albimana, Anisodactylus poeciloides, Anthonomus rufus, Baris analis, Berosus spinosus, Cantharis fusca, Drypta dentata, Leptura fulva, Meligethes bidentatus, Paracymus aeneus, Staphylinus caesareus, Aphrosylus mitis, Atylotus latistriatus, Dorycera graminum, Haematopoda grandis, Hippobosca equina, Linnaemya comta, Stratiomys longicornis, Syntormon mikii, Tetanocera freyi, Villa circumdata, Trachysphaera lobata, Paludinella littorina, Truncatellina cylindrica, Andrena alfenella, Acleris lorquiniana, Elachista littoricola, Melissoblaptis zelleri, Platytes alpinella, Psamathrocrita argentella, Armandia cirrhosa

21. Social and cultural values:

Aesthetic
 Aquatic vegetation (e.g. reeds, willows, seaweed)
 Archaeological/historical site
 Conservation education
 Current scientific research
 Fisheries production
 Livestock grazing
 Non-consumptive recreation
 Sport fishing
 Sport hunting
 Tourism
 Traditional cultural
 Transportation/navigation

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Non-governmental organisation	+	+
Local authority, municipality etc.	+	+
National/Crown estate	+	+
Private	+	+
Public/communal	+	+
Other	+	+

23. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	
Tourism	+	
Recreation	+	
Research	+	
Collection of non-timber natural products: (unspecified)	+	
Commercial forestry		+
Cutting for firewood	+	
Fishing: (unspecified)	+	
Fishing: commercial	+	
Fishing: recreational/sport	+	
Marine/saltwater aquaculture	+	
Gathering of shellfish	+	
Bait collection	+	
Arable agriculture (unspecified)		+
Permanent arable agriculture		+
Permanent pastoral agriculture	+	
Hay meadows	+	

Hunting: recreational/sport	+	
Industry		+
Sewage treatment/disposal	+	
Harbour/port	+	
Flood control	+	
Irrigation (inc agricultural water supply)		+
Mineral exploration		+
Oil/gas exploration		+
Oil/gas production		+
Transport route		+
Domestic water supply		+
Urban development		+
Non-urbanised settlements		+
Military activities	+	+

24. Factors adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2		+		+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Erosion - Coastal Defence Strategies, regulation of private coastal defences, shoreline management plans, ChAMPs are in place or are being developed.

Is the site subject to adverse ecological change? YES

25. Conservation measures taken:

Conservation measure	On-site	Off-site
SSSI / ASSI	+	
NNR	+	+
SPA	+	
Land owned by a NGO for nature conservation	+	+

Management agreement	+	+
SAC	+	
Management plan in preparation	+	

26. Conservation measures proposed but not yet implemented:

No information available

27. Current scientific research and facilities:**Contemporary.**

Numbers of migratory and wintering waterfowl are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

Bird Ringing by Solent Shorebirds Study Group.

Environment.

Coastal Sediment (SCOPAC)

Water Quality (EA/Southern Water)

Various research and educational establishments carry out ongoing research into a number of different aspects of the environment.

Flora.

Saltmarsh Monitoring (EN project).

Spartina survey (EN project).

Completed.**Flora.**

Sand dune and saltmarsh NVC survey.

Habitats.

Habitat surveys (various local individual surveys).

Species surveys (various local individual surveys).

28. Current conservation education:

Various educational programmes exist within the voluntary conservation organisations, research institutes, education centres and also Local Authorities e.g. Newtown National Nature Reserve managed by National Trust, Medina Valley Centre, and Southampton Oceanography Centre.

There are a number of interpretation facilities present and proposed in the area e.g. National Nature Reserve & Local Nature Reserve and proposed centre of coastal management on Isle of Wight.

29. Current recreation and tourism:**Activities, Facilities provided and Seasonality.**

Almost all the estuaries in the Ramsar site are used extensively for a wide range of leisure and recreational activities, particularly water-based recreation.

Land based recreation:

Walking including dog-walking is popular along large stretches of the coast and estuaries. The presence of country parks, NNR and LNRs on the coast also attract large numbers of people to certain locations.

Bait-digging and collection of shellfish occurs in a number of locations. Birdwatching is also a popular activity with a number of favoured locations with easy access. Some golf courses are also present.

Water-based recreation:

The Solent is an internationally important centre for yachting, dinghy sailing and power-boating and nationally important for canoeing, and water-skiing. A small amount of hovercraft racing sometimes occurs.

Wildfowling and egg collection:

Private, syndicate and club wildfowling operate on the marshes. Small-scale egg-collecting also occurs. Bait-digging and angling also occur.

Air Recreation:

There is a proposed microlighting centre within the area.

The high degree of recreation in the Solent is accompanied by a high degree of supporting developments e.g. marinas, boatyards, clubs, holiday centres occur throughout the area.

30. Jurisdiction:

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

31. Management authority:

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

32. Bibliographical references:

Site-relevant references

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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
 Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: europa@ramsar.org

European Site Conservation Objectives for Solent and Southampton Water Special Protection Area Site Code: UK9011061



With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)

A052 *Anas crecca*; Eurasian teal (Non-breeding)

A137 *Charadrius hiaticula*; Ringed plover (Non-breeding)

A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)

A176 *Larus melanocephalus*; Mediterranean gull (Breeding)

A191 *Sterna sandvicensis*; Sandwich tern (Breeding)

A192 *Sterna dougallii*; Roseate tern (Breeding)

A193 *Sterna hirundo*; Common tern (Breeding)

A195 *Sterna albifrons*; Little tern (Breeding)

Waterbird assemblage

This is a European Marine Site

This SPA is a part of the the Solent Maritime European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 21 February 2019 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

ANNEX 6

Solent Maritime SAC Data Form and Conservation Objectives

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name:	Solent Maritime
Unitary Authority/County:	City of Portsmouth, City of Southampton, Hampshire, Isle of Wight, West Sussex
SAC status:	Designated on 1 April 2005
Grid reference:	SU756003
SAC EU code:	UK0030059
Area (ha):	11325.09
Component SSSI:	Bouldnor and Hamstead Cliffs SSSI, Chichester Harbour SSSI, Eling and Bury Marshes SSSI, Hurst Castle and Lymington River Estuary SSSI, Hythe to Calshot Marshes SSSI, King's Quay Shore SSSI, Langstone Harbour SSSI, Lee-on-the-Solent to Itchen Estuary SSSI, Lincegrove and Hackett's Marshes SSSI, Lower Test Marshes SSSI, Medina Estuary SSSI, Newtown Harbour SSSI, North Solent SSSI, Thorness Bay SSSI, Upper Hamble Estuary and Woods SSSI, Yar Estuary SSSI

Site description:

The Solent encompasses a major estuarine system on the south coast of England with four coastal plain estuaries (Yar, Medina, King's Quay Shore, Hamble) and four bar-built estuaries (Newtown Harbour, Beaulieu, Langstone Harbour, Chichester Harbour). The Solent and its inlets are unique in Britain and Europe for their hydrographic regime with its double tides, as well as for the complexity of the marine and estuarine habitats present within the area.

Sediment habitats within the estuaries include extensive estuarine flats, intertidal areas that support eelgrass *Zostera* spp., sand and shingle spits, and natural shoreline transitions. The mudflats range from low and variable salinity in the upper reaches of the estuaries to very sheltered almost fully marine muds in Chichester and Langstone Harbours. As well as occurring within the estuaries, mudflats and sandflats are found throughout the Solent and form the predominant intertidal substrates. Unusual features include the presence of very rare sponges in the Yar estuary and a sandy 'reef' of the polychaete *Sabellaria spinulosa* on the steep eastern side of the entrance to Chichester Harbour.

Shallow sediment communities (comprising the subtidal sandbanks feature) occur around the Solent, particularly in the large harbours. They are typically colonised by a burrowing fauna of worms, crustaceans, bivalve molluscs and echinoderms. Where coarse stable material is present, species attached to the surface may include foliose algae, hydroids, bryozoans and ascidians. Mixtures of sand and associated hard substrate can lead to the presence of very rich communities. Mobile fauna at the surface of the sandbanks may include shrimps, prosobranch molluscs, crabs and fish. Shallow sandy sediments may be important nursery areas for fish and feeding grounds for seabirds.

Pioneer saltmarsh vegetation colonises intertidal mud and sandflats in areas protected from strong wave action. This habitat is dominated by open stands of glasswort *Salicornia* spp. or annual sea-blite *Suaeda maritima*. It occurs within pioneer marsh communities along the lower marsh and at the lower limits of tidal inundation, as well as in small depressions or salt pans in the upper and middle saltmarsh, or in narrow strips running along the margins of

rivulets and creeks within the saltmarsh. This is one of only two sites where significant amounts of the native cordgrass species, small cord-grass *S. maritima* are found. It is also the only site for the naturalised North American species, smooth cord-grass *Spartina alterniflora* in the UK, and one of the few remaining sites for Townsend's cord-grass *S. x townsendii*. There are also extensive areas of common cord-grass *Spartina anglica* throughout the site. Thus all four cord-grass taxa occur here in close proximity.

The Solent contains the second-largest aggregation of Atlantic salt meadows in south and south-west England. The salt meadows are representative of the ungrazed type and support a range of communities dominated by sea-purslane *Atriplex portulacoides*, common sea-lavender *Limonium vulgare* and thrift *Armeria maritima*. In general, the salt meadow is somewhat less truncated by man-made features in the Solent than other parts of the south coast. In places such as Chichester Harbour it shows rare and unusual transitions to freshwater reedswamp and alluvial woodland as well as coastal grassland. Typical Atlantic salt meadow is still widespread in this site, despite a long history of colonisation by cord-grass *Spartina* spp.

Driftline habitats support a number of specialist plant species and can be found on a variety of coarse substrates across the Solent, including shingle beaches, shingle spits, shingle islands and chenier banks (formed by the deposition of broken shells by wave action on the saltmarsh edge). A transition is found in many areas from vegetated shingle to saltmarsh. Two important driftline communities can be identified. The first is dominated by spear-leaved orache *Atriplex prostrata* or grass-leaved orache *A. littoralis* on the seaward edge of the shingle. The second are sea sandwort *Honkenya peploides* – sea rocket *Cakile maritima* strandline communities with perennial associations of sea mayweed *Tripleurospermum maritimum*, curled dock *Rumex crispus*, sea beet *Beta vulgaris* ssp. *maritima*, sea campion *Silene uniflora* and yellow-horned poppy *Glaucium flavum*.

On more stable (typically landward) shingle or stony substrates, additional perennial species are found (these communities comprise the perennial vegetation of stony banks feature). There are at least four distinct community types present within the Solent including a specialised community characterised by hare's-foot clover *Trifolium arvense* occurring with lichens and mosses. Sites such as Calshot Spit and Chichester Harbour are important locations for this feature.

The site supports a number of coastal lagoons both on the Isle of Wight and along the Hampshire coast. This suite of lagoons provides examples of a variety of successional stages and salinity regimes including quite brackish conditions. Some of the lagoons support specialised invertebrates such as the nationally rare insensible shrimp *Gammarus insensibilis* occurring at Yar Bridge lagoon on the Isle of Wight.

The extensive sand dunes at East Head at the mouth of Chichester Harbour are dominated by marram grass *Ammophila arenaria*. There are also accreting sand dunes found at Pilsey Island in Chichester Harbour.

Desmoulin's whorl snail *Vertigo moulinsiana*, which is rare in Great Britain and usually occurs within base-rich wetlands where there are long established swamps, fens and marshes, is found in the reedbeds at the top of Fishbourne channel in Chichester Harbour.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Annual vegetation of drift lines
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Coastal lagoons*
- *Spartina* swards (*Spartinion maritimae*). (Cord-grass swards)
- Estuaries
- Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats)
- Perennial vegetation of stony banks. (Coastal shingle vegetation outside the reach of waves)
- *Salicornia* and other annuals colonising mud and sand. (Glasswort and other annuals colonising mud and sand)
- Sandbanks which are slightly covered by sea water all the time. (Subtidal sandbanks)
- Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes). (Shifting dunes with marram)

Qualifying species: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Desmoulin's whorl snail *Vertigo moulinsiana*

Annex I priority habitats are denoted by an asterisk (*).

This citation relates to a site entered in the Register of European Sites for Great Britain.

Register reference number: UK0030059

Date of registration: 14 June 2005

Signed: *Trew Salmon*

On behalf of the Secretary of State for Environment,
Food and Rural Affairs

STANDARD DATA FORM for sites within the 'UK national site network of European sites'

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the [Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 \(2011/484/EU\)](#).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the [SPA homepage](#) and [SAC homepage](#) on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

<https://jncc.gov.uk/>



NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE UK0030059
SITENAME Solent Maritime

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- [6. SITE MANAGEMENT](#)

1. SITE IDENTIFICATION

1.1 Type B	1.2 Site code UK0030059	Back to top
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1.3 Site name

Solent Maritime

1.4 First Compilation date 1998-10	1.5 Update date 2015-12
----------------------------------------------	-----------------------------------

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee
Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough
PE1 1JY
Email:

Date site proposed as SCI: 1998-10
Date site confirmed as SCI: 2004-12
Date site designated as SAC: 2005-04

National legal reference of SAC designation:

Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010
(<http://www.legislation.gov.uk/uksi/2010/490/contents/made>).

2. SITE LOCATION

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2.1 Site-centre location [decimal degrees]:

Longitude

-0.927777778

Latitude

50.79638889

2.2 Area [ha]:

11243.12

2.3 Marine area [%]

91.9

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code

Region Name

UKJ3	Hampshire and Isle of Wight
UKZZ	Extra-Regio
UKJ2	Surrey, East and West Sussex

2.6 Biogeographical Region(s)

Atlantic (100.0
%)

3. ECOLOGICAL INFORMATION

3.1 Habitat types present on the site and assessment for them

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Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A B C D	A B C		
						Representativity	Relative Surface	Conservation	Global
1110B			3597.8	0	M	C	C	C	C
1130B			6633.44	0	G	A	B	B	B
1140B			5059.4	0	G	A	C	B	C
1150B	X		146.16	0	P	C	B	B	C
1210B			112.43	0	P	C	A	B	C
1220B			112.43	0	M	C	B	B	C
1310B			123.67	0	P	B	B	B	C
1320B									

			94.44	0	P	A		A	C	A
1330			2023.76	0	M	B		B	B	B
2120			112.43	0	M	C		B	B	C
2130	X		112.43	0	M	D				

- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species			Population in the site							Site assessment				
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A B C D	A B C		
						Min	Max				Pop.	Con.	Iso.	Glo.
M	1355	Lutra lutra			p				P	DD	D			
M	1365	Phoca vitulina			p				P	DD	D			
I	1016	Vertigo moulinsiana			p				R	DD	B	B	B	C

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

4.1 General site character

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Habitat class	% Cover
N16	0.5
N03	23.0
N05	3.0

N04	0.5
N01	14.0
N02	59.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: shingle, sedimentary, sand, alluvium, mud, neutral, nutrient-rich, clay 2 Terrestrial: Geomorphology and landscape: island, lowland, coastal 3 Marine: Geology: sand, clay, sedimentary, gravel, mud, limestone/chalk, shingle, sandstone/mudstone 4 Marine: Geomorphology: open coast (including bay), estuary, enclosed coast (including embayment), shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), islands, lagoon

4.2 Quality and importance

Sandbanks which are slightly covered by sea water all the time for which the area is considered to support a significant presence. Estuaries for which this is considered to be one of the best areas in the United Kingdom. Mudflats and sandflats not covered by seawater at low tide for which the area is considered to support a significant presence. Coastal lagoons for which the area is considered to support a significant presence. Annual vegetation of drift lines for which the area is considered to support a significant presence. which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 100 hectares. Perennial vegetation of stony banks for which the area is considered to support a significant presence. Salicornia and other annuals colonising mud and sand for which the area is considered to support a significant presence. Spartina swards (*Spartina maritima*) for which this is one of only two known outstanding localities in the United Kingdom. which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 100 hectares. Atlantic salt meadows (*Glauco-Puccinellietalia maritima*) for which this is considered to be one of the best areas in the United Kingdom. Shifting dunes along the shoreline with *Ammophila arenaria* (?white dunes?) for which the area is considered to support a significant presence. *Vertigo moulinsiana* for which the area is considered to support a significant presence.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
H	H02		B
H	G01		I
H	M02		B
H	F02		I
H	M01		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]
H	A03		I
H	A02		I
H	A04		I
H	D05		I
H	D05		I
H	B02		I

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): <http://publications.naturalengland.org.uk/category/6490068894089216>

<http://publications.naturalengland.org.uk/category/3212324>

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK00	28.6	UK01	4.5	UK04	71.4

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

<input type="checkbox"/> Yes
<input type="checkbox"/> No, but in preparation
<input checked="" type="checkbox"/> No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the [official European Union guidelines for the Standard Data Form](#) (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (<i>Spartinion maritimae</i>)	57
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with <i>Empetrum nigrum</i>	57
2150	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)	57
2160	Dunes with <i>Hippophya rhamnoides</i>	57
2170	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with <i>Juniperus</i> spp.	57
2330	Inland dunes with open <i>Corynephorus</i> and <i>Agrostis</i> grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	57
3150	Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representativity	57
B	Good representativity	57
C	Significant representativity	57
D	Non-significant presence representativity	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code
-----	----------------------------------------------------------------------	------------------

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Scree, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic resources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

European Site Conservation Objectives for Solent Maritime Special Area of Conservation Site Code: UK0030059



With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of qualifying natural habitats and habitats of qualifying species**
- **The structure and function (including typical species) of qualifying natural habitats**
- **The structure and function of the habitats of qualifying species**
- **The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely**
- **The populations of qualifying species, and,**
- **The distribution of qualifying species within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

H1110. Sandbanks which are slightly covered by sea water all the time

H1130. Estuaries

H1140. Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats

H1150. Coastal lagoons*

H1210. Annual vegetation of drift lines

H1220. Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves

H1310. *Salicornia* and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand

H1320. *Spartina* swards (*Spartinion maritimae*); Cord-grass swards

H1330. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

H2120. Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram

S1016. *Vertigo moulinsiana*; Desmoulin's whorl snail

* denotes a priority natural habitat or species (supporting explanatory text on following page)

This is a European Marine Site

This site is a part of the Solent Maritime European Marine Site. These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

* Priority natural habitats or species

Some of the natural habitats and species for which UK SACs have been selected are considered to be particular priorities for conservation at a European scale and are subject to special provisions in the Habitats Regulations. These priority natural habitats and species are denoted by an asterisk (*) in Annex I and II of the Habitats Directive. The term 'priority' is also used in other contexts, for example with reference to particular habitats or species that are prioritised in UK Biodiversity Action Plans. It is important to note however that these are not necessarily the priority natural habitats or species within the meaning of the Habitats Regulations.

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 as amended from time to time (the "Habitats Regulations"). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment', including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where available) will also provide a framework to inform the measures needed to conserve or restore the European Site and the prevention of deterioration or significant disturbance of its qualifying features.

These Conservation Objectives are set for each habitat or species of a [Special Area of Conservation \(SAC\)](#). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving Favourable Conservation Status for that species or habitat type at a UK level. The term 'favourable conservation status' is defined in regulation 3 of the Habitats Regulations.

Publication date: 27 November 2018 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

ANNEX 7

New Forest SPA / SAC Data Forms, Ramsar
Information Sheet and Conservation Objectives

Information Sheet on Ramsar Wetlands (RIS)

1. Name and address of the compiler of this form:**Joint Nature Conservation Committee**

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: RIS@JNCC.gov.uk

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DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 22 September 1993 / Updated: May 2005

3. Country:

UK (England)

4. Name of the Ramsar site:

The New Forest

5. Map of site included:**a) hard copy** (required for inclusion of site in the Ramsar List): *yes -or- no***b) digital (electronic) format** (optional): No

6. Geographical coordinates (latitude/longitude):

50° 49' 32'' N 01° 39' 22'' W

7. General location:

Nearest town/city: Southampton

Central southern England

Administrative region: Hampshire; Wiltshire

8. Elevation (average and/or max. & min.) (metres): **9. Area** (hectares): 28003

Min. No information available

Max. No information available

Mean No information available

10. Overview:

The New Forest is an area of semi-natural vegetation including valley mires, fens and wet heath within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. The habitats present are of high ecological quality and diversity with undisturbed transition zones.

The suite of mires is regarded as the *locus classicus* of this type of mire in Britain. Other wetland habitats include numerous ponds of varying size and water chemistry including several ephemeral ponds and a network of small streams mainly acidic in character which have no lowland equivalent in the UK. The plant communities in the numerous valleys and seepage step mires show considerable variation, being affected especially by the nutrient content of groundwater. In the most nutrient-poor zones, *Sphagnum* bog-mosses, cross-leaved heath, bog asphodel, common cottongrass and similar species predominate. In more enriched conditions the communities are more fen-like.

11. Ramsar Criteria:

1, 2, 3

12. Justification for the application of each Criterion listed in 11. above:

Ramsar criterion 1

Valley mires and wet heaths are found throughout the site and are of outstanding scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. This is the largest concentration of intact valley mires of their type in Britain.

Ramsar criterion 2

The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plants are found on the site, as are at least 65 British Red Data Book species of invertebrate.

The higher plants *Cicendia filiformis*, *Illecebrum verticillatum* and *Myosurus minimus* are considered vulnerable by the GB Red Book; while *Mentha pulegium* and *Ranunculus tripartitus* are included as endangered; and *Pulicaria vulgaris* as critically endangered.

The Dark Guest Ant *Anergates atratulus* is also considered vulnerable by the IUCN Red List.

Ramsar criterion 3

The mire habitats are of high ecological quality and diversity and have undisturbed transition zones. The invertebrate fauna of the site is important due to the concentration of rare and scarce wetland species. The whole site complex, with its examples of semi-natural habitats is essential to the genetic and ecological diversity of southern England. The site contains a rich invertebrate fauna.

13. Biogeography:**a) biogeographic region:**

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

14. Physical features of the site:

Soil & geology	acidic, neutral, sand, clay, alluvium, peat, nutrient-poor, gravel
Geomorphology and landscape	lowland, hilly
Nutrient status	oligotrophic
pH	acidic, alkaline
Salinity	fresh
Soil	mainly mineral
Water permanence	usually permanent, usually seasonal / intermittent
Summary of main climatic features	Annual averages (Everton, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/everton.html) Max. daily temperature: 14.0° C Min. daily temperature: 7.0° C Days of air frost: 32.5 Rainfall: 763.7 mm Hrs. of sunshine: 1750.7

General description of the Physical Features:

No information available

15. Physical features of the catchment area:

No information available

16. Hydrological values:

Flood water storage / desynchronisation of flood peaks, maintenance of water quality (removal of nutrients)

17. Wetland types

Inland wetland

Code	Name	% Area
Xp	Forested peatland	0.4
M	Rivers / streams / creeks: permanent	0.4
U	Peatlands (including peat bogs swamps, fens)	5.3
W	Shrub-dominated wetlands	0.6
Xf	Freshwater, tree-dominated wetlands	0.8
Other	Other (valley mires, fens and wet heath, network of small streams mainly acidic, woods etc.)	92.5

18. General ecological features:

The New Forest valley mires and fens include the following community types:

M21a *Narthecium ossifragum*–*Sphagnum papillosum* mire, *Sphagnum auriculatum*–*Rhynchospora* sub-community; M6di *Carex echinata*–*Sphagnum recurvum* mire, *Juncus acutiflorus* sub-community; M29 *Hypericum elodes*–*Potamogeton polygonifolius* soakway; M1 *Sphagnum auriculatum* bog pool; M14 *Schoenus nigricans*–*Narthecium ossifragum* mire, and other marl bogs.

Alder carr: W4 *Betula pubescens*–*Molinia caerulea* and W5 *Alnus glutinosa*–*Carex paniculata*.

Wet heath: M16a *Erica tetralix*–*Sphagnum compactum* wet heath, *Succisa pratensis*–*Carex panicea* sub-community, and M16c *Erica tetralix*–*Sphagnum compactum* wet heath, *Rhynchospora alba*–*Drosera intermedia* sub-community.

Other inundation communities of note are: MG8; MG11; MG13; M22 and M23.

Bog woodland – rich in relict lichen communities.

Residual floodplain woodland.

19. Noteworthy flora:**Nationally important species occurring on the site.****Higher Plants.**

Pulicaria vulgaris, *Eriophorum gracile*, *Mentha pulegium*, *Ludwigia palustris*, *Pilularia globulifera*, *Elatine hexandra*, *Eleocharis acicularis*, *Gentiana pneumonanthe*, *Illecebrum verticillatum*, *Lycopodium inundatum*, *Carex montana*, *Cicendia filiformis*, *Deschampsia setacea*, *Thelypteris palustris*, *Hammarbya paludosa*, *Eleocharis parvula*, *Galium debile*, *Gentiana pneumonanthe*, *Impatiens noli-tangere*, *Myosurus minimus*, *Oenanthe pimpinelloides*, *Parentucellia viscosa*, *Polygonum monspeliensis*, *Polygonum minus*, *Ranunculus tripartitus*, *Rhynchospora fusca*, *Thelypteris palustris*, *Utricularia intermedia*.

20. Noteworthy fauna:**Species currently occurring at levels of national importance:****Species regularly supported during the breeding season:**

Dartford warbler, *Sylvia undata*, Europe 538 pairs, representing an average of 33.6% of the GB population (Source period not collated)

Species with peak counts in winter:Hen harrier, *Circus cyaneus*, Europe

15 individuals, representing an average of 2% of the GB population (Source period not collated)

Species Information**Species occurring at levels of international importance.****Invertebrates.***Coenagrion mercuriale*, *Lucanus cervus***Nationally important species occurring on the site.****Amphibians.***Triturus cristatus***Fish.***Lampetra planeri*, *Cottus gobio***Invertebrates.**

Scientific Name	Common Name	GB Status
<i>Amara famelica</i>	A ground beetle	pRDB3
<i>Bagous frit</i>	A weevil	pRDB3
<i>Buckleria paladum</i>	A plum moth	pRDB3
<i>Caloptilia falconipennel</i>	A micro moth	pRDB3
<i>Cantharis fusca</i>	A soldier beetle	pRDB3
<i>Coniocleonus nebulosus</i>	A weevil	pRDB3
<i>Crambus silvella</i>	A pyralid moth	pRDB3
<i>Dieckmaniellus gracilis</i>	A seed weevil	pRDB3
<i>Euplectus punctatus</i>	A short-winged mould	pRDB3
<i>Lampronia fuscata</i>	A longhorn moth	pRDB3
<i>Leptura fulva</i>	A longhorn beetle	pRDB3
<i>Miscroscydmus minimus</i>	A small ant-like beetle	pRDB3
<i>Paraphotistus nigricorni</i>	A click beetle	pRDB3
<i>Procaerus tibialis</i>	A click beetle	pRDB3
<i>Telmatophilus brevicolli</i>	A silken fungus beetle	pRDB3
<i>Tenthredopsis friesei</i>	A sawfly	pRDB3
<i>Acritus homoeopathicus</i>	A carrion beetle	RDB3
<i>Ampedus cinnabarinus</i>	A click beetle	RDB3
<i>Aradus corticalis</i>	a flat bark bug	RDB3
<i>Arctosa fulvolineata</i>	A wolf spider	RDB3
<i>Brachyopa bicolor</i>	A hoverfly	RDB3
<i>Callicera aurata</i>	A hoverfly	RDB3
<i>Catocala promissa</i>	Light Crimson Underwing	RDB3
<i>Chorthippus vagans</i>	Heath Grasshopper	RDB3
<i>Coenagrion mercuriale</i>	Southern Damselfly	RDB3
<i>Colydium elongatum</i>	A narrow timber beet	RDB3
<i>Corticeus unicolour</i>	A darkling beetle	RDB3
<i>Diodontus insidiosus</i>	A solitary wasp	RDB3
<i>Enochrus isotae</i>	A scavenger water beetle	RDB3
<i>Grammoptera ustulata</i>	A longhorn beetle	RDB3
<i>Haematopota grandis</i>	A horse fly	RDB3
<i>Haliphus variegatus</i>	A crawling water beetle	RDB3
<i>Halpodrassus umbratilis</i>	A ground spider	RDB3
<i>Heliothis maritima</i>	Shoulder-striped Clover	RDB3
<i>Heterogenea asella</i>	Triangle	RDB3
<i>Hirudo medicinalis</i>	Medicinal Leech	RDB3
<i>Hydrothassa hannoveriana</i>	A leaf beetle	RDB3
<i>Leptothorax interruptus</i>	An ant	RDB3

<i>Leptura sexguttata</i>	6 spotted longhorn	RDB3	
<i>Malachius aeneus</i>	A malachine beetle	RDB3	
<i>Mesosa nebulosa</i>	A longhorn beetle	RDB3	
<i>Microrhagus pygmaeus</i>	A false click beetle	RDB3	
<i>Moma alpium</i>	Scarce merveille du jour	RDB3	
<i>Nysius helveticus</i>	A ground bug	RDB3	
<i>Ortholomus punctipennis</i>	A ground bug	RDB3	
<i>Orthoperus brunripes</i>	A minute fungus beetle	RDB3	
<i>Pachybrachius luridus</i>	A ground bug	RDB3	
<i>Paederus caligatus</i>	A rove beetle	RDB3	
<i>Pelecocera tricincta</i>	A hoverfly	RDB3	
<i>Psen spooneri</i>	A solitary wasp	RDB3	
<i>Thyridanthrax fenestratu</i>	A bee fly	RDB3	
<i>Tipula (Yamatipula) marginata</i>	A crane fly	RDB3	
<i>Triplax lacordairii</i>	A shiny fungus beetle	RDB3	
<i>Aderus brevicornis</i>	An aderid beetle	pRDB2	
<i>Donacia bicolora</i>	A leaf beetle	pRDB2	
<i>Gnorimus nobilis</i>	A dung beetle or chafer	pRDB2	
<i>Limonia (Mewtalimnobia)</i>	A crane fly	pRDB2	
<i>Neompheria bimaculata</i>	A fungus gnat	pRDB2	
<i>Trachys minuta</i>	A jewel beetle	pRDB2	
<i>Xyletinus longitarsis</i>	A wood boring beetle	pRDB2	
<i>Zeugophora flavicollis</i>	A leaf beetle	RDB2	
<i>Agabus brunneus</i>	A water beetle	RDB2	
<i>Argynnis adippe</i>	High Brown Fritillary	RDB2	
<i>Brachypeza armata</i>	A fungus gnat	RDB2	
<i>Catocala sponsa</i>	Dark Crimson Underwing	RDB2	
<i>Diaperis boleti</i>	A darkling beetle	RDB2	
<i>Graptodytes flavipes</i>	A water beetle	RDB2	
<i>Helophorus laticollis</i>	A scavenger water beetle	RDB2	
<i>Lymexylon navale</i>	A timber beetle	RDB2	
<i>Pachythelia villosella</i>	A bagworm moth	RDB2	
<i>Pocota personata</i>	A hoverfly	RDB2	
<i>Solva maculata</i>	A fly	RDB2	
<i>Stenoptilia graphodactyl</i>	A plume moth	RDB2	
<i>Stethophyma grossum</i>	Large Marsh Grasshopper	RDB2	
<i>Thanatus formicinus</i>	A running crab spider	RDB2	
<i>Anthicus tristis</i>	An antlike beetle	pRDB1	
<i>Chrysops sepulchralis</i>	A horse fly	pRDB1	
<i>Cicadette montana</i>	New Forest Cicada	pRDB1	
<i>Endophloeus markovichian</i>	A narrow timber beetle	pRDB1	
<i>Euheptaulacus sus</i>	a dung beetle	pRDB1	
<i>Gasterophilus nasalis</i>	A bot fly	pRDB1	
<i>Heptaulacus testudinariu</i>	A dung beetle or chafer	pRDB1	
<i>Lagria atripes</i>	A darkling beetle	pRDB1	
<i>Lebia cyanocephala</i>	A ground beetle	pRDB1	
<i>Manda mandibularis</i>	A rove beetle	pRDB1	
<i>Platydemus violaceum</i>	A darkling beetle	pRDB1	
<i>Pseudopomyza atrimana</i>	A fly	pRDB1	
<i>Pterostichus kugelanni</i>	A ground beetle	pRDB1	
<i>Silvanoprus fagi</i>	A beetle	pRDB1	
<i>Strangalia revestita</i>	A longhorn beetle	pRDB1	
<i>Tachinus bipustulatus</i>	A rove beetle	pRDB1	
<i>Tachys edmondsi</i>	A ground beetle	pRDB1	
<i>Tachys walkerianus</i>	A ground beetle	pRDB1	

<i>Acylophorus glaberrimus</i>	A rove beetle	RDB1
<i>Andrena ferox</i>	A solitary bee	RDB1
<i>Anthaxa nitidula</i>	A jewel beetle	RDB1
<i>Apalus muralis</i>	An oil beetle	RDB1
<i>Aphodius niger</i>	A dung beetle or chafer	RDB1
<i>Bagous brevis</i>	A weevil	RDB1
<i>Bagous czwalinai</i>	A weevil	RDB1
<i>Bagous longitarsis</i>	A weevil	RDB1
<i>Batrissodes delaporti</i>	A short-winged mould	RDB1
<i>Caliprobola speciosa</i>	A hoverfly	RDB1
<i>Chrysomela tremula</i>	A leaf beetle	RDB1
<i>Cryptocephalus nitidulus</i>	A leaf beetle	RDB1
<i>Emus hirtus</i>	Hairy Rove-beetle	RDB1
<i>Eucnemis capucina</i>	A false click beetle	RDB1
<i>Eutheia linearis</i>	A small antlike beetle	RDB1
<i>Formica transcaucasica</i>	The Bog Ant	RDB1
<i>Gryllus campestris</i>	Field Cricket	RDB1
<i>Homonotus sanguinolentus</i>	A spider-hunting wasp	RDB1
<i>Longitarsus nigerrimus</i>	A leaf beetle	RDB1
<i>Megapenthes lugens</i>	A click beetle	RDB1
<i>Melandrya barbata</i>	A false darkling beetle	RDB1
<i>Paromalus parallelepiped</i>	A carrion beetle	RDB1
<i>Potamia setifemur</i>	A muscid fly	RDB1
<i>Pterostichus aterrimus</i>	A ground beetle	RDB1
<i>Triops cancriformis</i>	Apus	RDB1
<i>Velleius dilatatus</i>	Hornet Rove-beetle	RDB1
<i>Anergates atratulus</i>	Dark Guest Ant	RDB K
<i>Atomaria lohsei</i>	A silken fungus beetle	RDB K
<i>Ptenidium turgidum</i>	A featherwing beetle	RDB K
<i>Aleochara fumata</i>	A rove beetle	pRDBK
<i>Atheta nannion</i>	A rove beetle	pRDBK
<i>Atheta puberula</i>	A rove beetle	pRDBK
<i>Biblopectus tenebrosus</i>	A short-winged mould	pRDBK
<i>Cryptophagus micaceus</i>	A silken fungus beetle	pRDBK
<i>Eutheia plicata</i>	A small antlike beetle	pRDBK
<i>Gyrophaena poweri</i>	A rove beetle	pRDBK
<i>Hister quadrimaculatus</i>	A carrion beetle	pRDBK
<i>Leiodes macropus</i>	A round fungus beetle	pRDBK
<i>Leiodes nigrita</i>	A round fungus beetle	pRDBK
<i>Leiodes triepkii</i>	A round fungus beetle	pRDBK
<i>Limotettix atricapillus</i>	A leafhopper	pRDBK
<i>Mordellistena humeralis</i>	A tumbling flower beetle	pRDBK
<i>Onthophagus fracticornis</i>	A dung beetle or chafer	pRDBK
<i>Phyllodrepa salicis</i>	A rove beetle	pRDBK
<i>Ptinella limbata</i>	A featherwing beetle	pRDBK
<i>Scydomoraphes sparshalli</i>	A small antlike beetle	pRDBK
<i>Sitona puberulus</i>	A weevil	pRDBK
<i>Stenichnus poweri</i>	A small antlike beetle	pRDBK
<i>Stenus morio</i>	A rove beetle	pRDBK
<i>Tabanus miki</i>	A horse fly	pRDBK
<i>Zyras cognatus</i>	A rove beetle	pRDBK
<i>Agathidium confusum</i>	A round fungus beetle	RDB I
<i>Amarochara bonnairei</i>	A rove beetle	RDB I
<i>Atomaria sahlbergi</i>	A silken fungus beetle	RDB I
<i>Cassida nebulosa</i>	A leaf beetle	RDB I

<i>Euconnus denticornis</i>	A small antlike beetle	RDB I
<i>Euplectus decipiens</i>	A short-winged mould	RDB I
<i>Euryusa optabilis</i>	A rove beetle	RDB I
<i>Ityocara rubens</i>	A rove beetle	RDB I
<i>Lithocharis obsoleta</i>	A rove beetle	RDB I
<i>Medon castaneus</i>	A rove beetle	RDB I
<i>Planeustomus flavicollis</i>	A rove beetle	RDB I
<i>Stenus asphaltinus</i>	A rove beetle	RDB I
<i>Stichoglossa semirufa</i>	A rove beetle	RDB I
<i>Tachnusus scapularis</i>	A rove beetle	RDB I
<i>Tychobythinus glabratus</i>	A short-winged mould	RDB I
<i>Bidessus unistriatus</i>		
<i>Formica candida</i>		
<i>Longitarsus ferrugineus</i>		
<i>Lymnaea glabra</i>		
<i>Biblioplectus tenebrosus</i>		
<i>Helophorus laticollis</i>		
<i>Hydroporus rufifrons</i>		
<i>Phaonia jaroschewskii</i>		
<i>Eristalis cryptarum</i>		
<i>Chirocephalus diaphanous</i>		
<i>Eyndyas nigripes</i>		
<i>Helophorus longitarsus</i>		
<i>Hydrochus elongates</i>		
<i>Hygropora cunctans</i>		
<i>Aleochara discipennis</i>		
<i>Athetis palustris</i>		
<i>Pelosia muscerda</i>		
<i>Dolichopus andalusiacus</i>		
<i>Tetanocera freyi</i>		
<i>Bagous collignesis</i>		
<i>Telmaturgus tumidulus</i>		
<i>Tabanus bovinus</i>		

21. Social and cultural values:

Aesthetic
 Archaeological/historical site
 Conservation education
 Current scientific research
 Forestry production
 Livestock grazing
 Non-consumptive recreation
 Sport fishing
 Sport hunting
 Tourism

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Non-governmental organisation	+	+
Local authority, municipality etc.	+	+
National/Crown estate	+	+
Private	+	
Other	+	+

23. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Research	+	
Commercial forestry	+	+
Cutting for firewood	+	+
Cutting of vegetation (small scale/subsistence)	+	
Fishing: recreational/sport	+	+
Bait collection		+
Shifting arable agriculture		+
Livestock watering hole/pond	+	
Grazing (unspecified)	+	+
Rough or shifting grazing		+
Permanent pastoral agriculture	+	+
Hay meadows	+	+
Hunting: recreational/sport	+	+
Sewage treatment/disposal	+	+
Flood control	+	+
Mineral exploration	+	+
Transport route	+	+
Urban development		+
Non-urbanised settlements		+
Military activities	+	

24. Factors adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Commercial scale forest exploitation	1		+	+	+
Drainage/reclamation: (unspecified)	1		+	+	+
Introduction/invasion of exotic plant species	1		+		
Recreational/tourism disturbance (unspecified)	1		+	+	

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Is the site subject to adverse ecological change? NO

25. Conservation measures taken:

Conservation measure	On-site	Off-site
SSSI / ASSI	+	+
NNR	+	+
SPA	+	
Land owned by a NGO for nature conservation	+	+
Management agreement	+	
Site management statement/plan implemented	+	
SAC	+	

26. Conservation measures proposed but not yet implemented:

No information available

27. Current scientific research and facilities:

Contemporary.

Environment.

SSSI monitoring.

Flora and Fauna.

Research into the effects of disturbance of ground-nesting birds has been discussed and once methodologies have been agreed resources will be sought.

Completed.

Flora and Fauna.

Vegetation and Invertebrate Surveys of selected sites.

28. Current conservation education:

Facilities include Minstead Study Centre and the Countryside Education Trust which is available for local schools and institutions. A ranger/recreation Service is provided by the Forestry Commission.

29. Current recreation and tourism:

Activities, Facilities provided and Seasonality.

Camping, informal walking, horse-riding, cycling, bird-watching, shooting, etc - all year.

No evidence that current levels of recreational activities threaten site. Recreational facilities are now under review.

30. Jurisdiction:

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

31. Management authority:

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House,
Northminster Road, Peterborough, PE1 1UA, UK

32. Bibliographical references:

Site-relevant references

Cooper, G (2004) *The New Forest*. Hampshire County Council HantsWeb. www.hants.gov.uk/newforest

Tubbs, CR (1986) *The New Forest*. Collins, London (New Naturalist No. 73)

McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough. www.jncc.gov.uk/SACselection

Stewart, NF (2004) *Important stonewort areas. An assessment of the best areas for stoneworts in the United Kingdom*. Plantlife International, Salisbury

Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**

Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: europa@ramsar.org

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name:	The New Forest
Unitary Authority/County:	Hampshire, Wiltshire
SAC status:	Designated on 1 April 2005
Grid reference:	SU225075
SAC EU code:	UK0012557
Area (ha):	29262.36
Component SSSI:	Landford Bog SSSI, Langley Wood and Homan's Copse SSSI, Loosehanger Copse and Meadows SSSI, Roydon Woods SSSI, The New Forest SSSI, Whiteparish Common SSSI

Site description:

The New Forest embraces the largest area of 'unsown' vegetation in lowland England and includes the representation on a large scale of habitats formerly common but now fragmented and rare in lowland western Europe. The intimate mosaic of habitats owes much to the local geology and traditional commoning grazing system, a situation which is uncommon in lowland England. The habitats include lowland heath, valley and seepage step mire, or fen, and ancient pasture woodland, including riparian and bog woodland. Nowhere else do these habitats occur in combination and on so large a scale. Within the matrix of habitats are pasture woodland and scrub dominated by oak, beech and holly; heathland and associated grassland; wet heath, valley mire-fen and plantations dating from various periods since the early 18th century, and a range of acid to neutral grasslands.

The New Forest contains the most extensive areas of active wood-pasture in north west Europe comprising mature, semi-natural beech *Fagus sylvatica*, which represent Atlantic beech forests in the most southerly part of the habitat's range, together with old oak *Quercus* spp. This mosaic, with other types of woodland and heath, has allowed unique and varied assemblages of epiphytic lichens and saproxylic (dead wood) invertebrates – in particular the stag beetle, *Lucanus cervus* – to be sustained in situations where the woodland is open and the tree trunks receive sunlight.

Occasionally in wet hollows, birch – willow *Betula* – *Salix* stands occur over valley bog vegetation, with fringing alder *Alnus* – *Sphagnum* stands where there is some water movement. These stands of bog woodland appear to have persisted for long periods in stable association with the underlying *Sphagnum* bog-moss communities. The rich epiphytic lichen communities and pollen record provide evidence for the persistence of this association.

The Forest also contains many streams and small rivers some of which are less affected by drainage and canalisation than those in any other comparable area in the lowlands of England. Associated with many of the streams, particularly those with alkaline and neutral groundwater, are areas of alder *Alnus glutinosa* woodland which, collectively, form an extensive resource with a rich flora. In places there are examples of transitions from open water through reedswamp and fen to alder woodland. In other places there are transitions to oak woods and beech forests with holly and sometimes yew in the shrub layer.

The site contains the most extensive stands of lowland northern Atlantic wet heaths in southern England, mainly of the *Erica tetralix* – *Sphagnum compactum* type; *Schoenus nigricans* – *Narthecium ossifragum* mire is also found on this site. The wet heaths are

important for rare plants, such as marsh gentian *Gentiana pneumonanthe* and marsh clubmoss *Lycopodiella inundata*, and a number of dragonfly species, including the scarce blue-tailed damselfly *Ischnura pumilio*, southern damselfly *Coenagrion mercuriale* and small red damselfly *Ceriagrion tenellum*.

The largest area of lowland dry heathland in the UK is also found in the Forest. It is particularly important for the diversity of its habitats and the range of rare and scarce species it supports. The dry heaths of the New Forest comprise two main communities; the *Calluna vulgaris* – *Ulex minor* heath type, and *Ulex minor* – *Agrostis curtisii* heath type. There are a wide range of transitions between dry heath and wet heath, *Molinia* grassland, fen, acid grassland and various types of scrub and woodland. The New Forest *Molinia* meadows are unusual in the UK in terms of their species composition and management. The healthy form of *Molinia caerulea* – *Cirsium dissectum* fen-meadow occurs in areas of heavy grazing by ponies and cattle in areas known locally as ‘lawns’, often in a fine-scale mosaic with wet heaths and other mire and grassland communities. These lawns occur on flushed soils on slopes and on level terrain on the floodplains of rivers and streams. The grasslands are species-rich, and particular features are the abundance of small sedges such as carnation sedge *Carex panicea*, common sedge *C. nigra* and yellow-sedge *C. viridula* ssp. *oedocarpa*, and the more frequent occurrence of mat-grass *Nardus stricta* and petty whin *Genista anglica* compared to stands elsewhere in the UK.

Hatchet Pond, and associated ponds, are examples of oligotrophic (nutrient-poor) waterbodies amidst wet and dry lowland heath developed over fluvial deposits. It contains shoreweed *Littorella uniflora* and isolated populations of northern species such as bog orchid *Hammarbya paludosa* and floating bur-reed *Sparganium angustifolium*, alongside rare southern species such as Hampshire-purslane *Ludwigia palustris*. This pond is important as a southern example of this lake type where northern species, more common in the uplands of the UK, co-exist with southern species.

The site also contains nutrient-poor vegetation on the edge of large temporary ponds, shallow ephemeral pools and poached damp hollows in grassland, which support a number of specialist species in a zone with toad rush *Juncus bufonius*. These include the two nationally scarce species coral-necklace *Illecebrum verticillatum* and yellow centaury *Cicendia filiformis*, often in association with allseed *Radiola linoides* and chaffweed *Anagallis minima*. Continuous grazing pressure is of prime importance in the maintenance of the outstanding flora of these temporary pond communities. Temporary ponds occur throughout the Forest in depressions capable of holding water for part of the year. Most ponds are small (between 5-10m across) and, although great in number, amount to less than 10ha in total area. Many of these contain great crested newt, *Triturus cristatus*.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Alkaline fens. (Calcium-rich springwater-fed fens)
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*). (Alder woodland on floodplains)*
- *Asperulo-Fagetum* beech forests. (Beech forests on neutral to rich soils)
- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*). (Beech forests on acid soils)
- Bog woodland*
- Depressions on peat substrates of the *Rhynchosporion*
- European dry heaths
- *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). (Purple moor-grass meadows)
- Northern Atlantic wet heaths with *Erica tetralix*. (Wet heathland with cross-leaved heath)
- Old acidophilous oak woods with *Quercus robur* on sandy plains. (Dry oak-dominated woodland)
- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoeto-Nanojuncetea*. (Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels)
- Oligotrophic waters containing very few minerals of sandy plains: *Littorelletalia uniflorae*. (Nutrient-poor shallow waters with aquatic vegetation on sandy plains)
- Transition mires and quaking bogs. (Very wet mires often identified by an unstable 'quaking' surface)

Qualifying species: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Great crested newt *Triturus cristatus*
- Southern damselfly *Coenagrion mercuriale*
- Stag beetle *Lucanus cervus*

Annex I priority habitats are denoted by an asterisk (*).

This citation relates to a site entered in the Register of European Sites for Great Britain.

Register reference number: UK0012557

Date of registration: 14 June 2005

Signed: *Trevor Salmon*

On behalf of the Secretary of State for Environment, Food and Rural Affairs

STANDARD DATA FORM for sites within the 'UK national site network of European sites'

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the [Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 \(2011/484/EU\)](#).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the [SPA homepage](#) and [SAC homepage](#) on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

<https://jncc.gov.uk/>



NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE UK0012557
SITENAME The New Forest

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- [1. SITE IDENTIFICATION](#)
- [2. SITE LOCATION](#)
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- [5. SITE PROTECTION STATUS AND RELATION WITH CORINE BIOTOPES](#)
- [6. SITE MANAGEMENT](#)
- [7. MAP OF THE SITE](#)

1. SITE IDENTIFICATION

1.1 Type B	1.2 Site code UK0012557	Back to top
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1.3 Site name

The New Forest

1.4 First Compilation date 1995-06	1.5 Update date 2015-12
----------------------------------------------	-----------------------------------

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee
Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough
PE1 1JY
Email:

Date site proposed as SCI:	1995-06
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2005-04
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

2.1 Site-centre location [decimal degrees]:

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Longitude

-1.6806

Latitude

50.8664

2.2 Area [ha]:

29213.57

2.3 Marine area [%]

0.0

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code

Region Name

UKK1	Gloucestershire, Wiltshire and Bristol/Bath area
UKJ3	Hampshire and Isle of Wight

2.6 Biogeographical Region(s)

Atlantic (100.0
%)

3. ECOLOGICAL INFORMATION

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3.1 Habitat types present on the site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A B C D	A B C		
						Representativity	Relative Surface	Conservation	Global
3110			292.14	0	M	A	A	A	A
3130			292.14	0	M	A	C	A	A
4010			2044.95	0	M	A	C	B	A
4030			7595.53	0	G	A	C	A	A
6410			817.98	0	G	A	A	A	A
7140			292.14	0	M	A	B	B	C
7150			292.14	0	M	A	B	B	A
7230			292.14	0	M	A	B	B	C

9120			1986.52	0		G	A		A	B	A
9130			408.99	0		G	C		B	A	B
9190			292.14	0		M	A		B	B	A
91D0	X		292.14	0		M	B		A	B	B
91E0	X		292.14	0		M	A		B	B	A

- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species			Population in the site							Site assessment				
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A B C D		A B C	
						Min	Max				Pop.	Con.	Iso.	Glo.
M	1308	Barbastella barbastellus			p				P	DD	D			
I	1044	Coenagrion mercuriale			p				P	DD	A	A	B	A
F	1163	Cottus gobio			p				P	DD	D			
F	1096	Lampetra planeri			p				P	DD	D			
I	1083	Lucanus cervus			p				P	DD	B	A	C	B
M	1355	Lutra lutra			p				P	DD	D			
M	1323	Myotis bechsteinii			p				P	DD	D			
A	1166	Triturus cristatus			p	1001	10000	i		M	C	B	C	C

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with

some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover
N07	7.0
N09	10.0
N10	3.0
N17	17.0
N08	34.0
N16	29.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: sand,basic,peat,nutrient-poor,neutral,acidic,alluvium,sedimentary,clay 2
 Terrestrial: Geomorphology and landscape: lowland,slope,valley,floodplain

4.2 Quality and importance

Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) for which this is one of only four known outstanding localities in the United Kingdom. which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares. Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea for which this is considered to be one of the best areas in the United Kingdom. Northern Atlantic wet heaths with Erica tetralix for which this is considered to be one of the best areas in the United Kingdom. European dry heaths for which this is considered to be one of the best areas in the United Kingdom. Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) for which this is considered to be one of the best areas in the United Kingdom. Transition mires and quaking bogs for which the area is considered to support a significant presence. Depressions on peat substrates of the Rhynchosporion for which this is considered to be one of the best areas in the United Kingdom. Alkaline fens for which the area is considered to support a significant presence. Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion) for which this is considered to be one of the best areas in the United Kingdom. Asperulo-Fagetum beech forests for which this is considered to be one of the best areas in the United Kingdom. Old acidophilous oak woods with Quercus robur on sandy plains for which this is one of only four known outstanding localities in the United Kingdom. Bog woodland for which this is considered to be one of the best areas in the United Kingdom. which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares. Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) for which this is considered to be one of the best areas in the United Kingdom. Triturus cristatus for which the area is considered to support a significant presence. Coenagrion mercuriale for which this is considered to be one of the best areas in the United Kingdom. Lucanus cervus for which this is one of only four known outstanding localities in the United Kingdom.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
H	B02		I
H	K02		I

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]
H	A02		I
H	A04		I

H	G01		I
H	J02		B
H	I02		B

H	B02		I
H	D05		I

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): <http://publications.naturalengland.org.uk/category/6490068894089216>

<http://publications.naturalengland.org.uk/category/3212324>

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0	UK01	1.0		

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No, but in preparation
<input checked="" type="checkbox"/>	No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

7. MAP OF THE SITES

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INSPIRE ID:

Map delivered as PDF in electronic format (optional)

Yes No

Reference(s) to the original map used for the digitalisation of the electronic boundaries (optional).

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the [official European Union guidelines for the Standard Data Form](#) (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (<i>Spartinion maritimae</i>)	57
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with <i>Empetrum nigrum</i>	57
2150	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)	57
2160	Dunes with <i>Hippophya rhamnoides</i>	57
2170	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with <i>Juniperus</i> spp.	57
2330	Inland dunes with open <i>Corynephorus</i> and <i>Agrostis</i> grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	57
3150	Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietalia rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representativity	57
B	Good representativity	57
C	Significant representativity	57
D	Non-significant presence representativity	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code
-----	----------------------------------------------------------------------	------------------

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Scree, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic resources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

European Site Conservation Objectives for The New Forest Special Area of Conservation Site Code: UK0012557



With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of qualifying natural habitats and habitats of qualifying species**
- **The structure and function (including typical species) of qualifying natural habitats**
- **The structure and function of the habitats of qualifying species**
- **The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely**
- **The populations of qualifying species, and,**
- **The distribution of qualifying species within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

H3110. Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*); Nutrient-poor shallow waters with aquatic vegetation on sandy plains

H3130. Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*; Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels

H4010. Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath

H4030. European dry heaths

H6410. Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows

H7140. Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface

H7150. Depressions on peat substrates of the *Rhynchosporion*

H7230. Alkaline fens; Calcium-rich springwater-fed fens

H9120. Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*); Beech forests on acid soils

H9130. *Asperulo-Fagetum* beech forests; Beech forests on neutral to rich soils

H9190. Old acidophilous oak woods with *Quercus robur* on sandy plains

H91D0. Bog woodland*

H91E0. Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*); Alder woodland on floodplains*

S1044. *Coenagrion mercuriale*; Southern damselfly

S1083. *Lucanus cervus*; Stag beetle

S1166. *Triturus cristatus*; Great crested newt

* denotes a priority natural habitat or species (supporting explanatory text on following page)

* Priority natural habitats or species

Some of the natural habitats and species listed for which UK SACs have been selected are considered to be particular priorities for conservation at a European scale and are subject to special provisions in the Habitats Regulations. These priority natural habitats and species are denoted by an asterisk (*) in Annex I and II of the Habitats Directive. The term 'priority' is also used in other contexts, for example with reference to particular habitats or species that are prioritised in UK Biodiversity Action Plans. It is important to note however that these are not necessarily the priority natural habitats or species within the meaning of the Habitats Regulations.

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 as amended from time to time (the "Habitats Regulations"). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment', including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where available) will also provide a framework to inform the measures needed to conserve or restore the European Site and the prevention of deterioration or significant disturbance of its qualifying features.

These Conservation Objectives are set for each habitat or species of a [Special Area of Conservation \(SAC\)](#). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving Favourable Conservation Status for that species or habitat type at a UK level. The term 'favourable conservation status' is defined in regulation 3 of the Habitats Regulations.

Publication date: 27 November 2018 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.



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

**The New Forest Special Area of Conservation (SAC)
Site code: UK0012557**



Ancient Pasture Woodland in the New Forest. Photo: Bryan White

Date of Publication: 18 March 2019

About this document

This document provides Natural England's supplementary advice about the European Site Conservation Objectives relating to The New Forest SAC. This advice should therefore be read together with the [SAC Conservation Objectives](#).

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

This advice replaces a draft version dated 8 February 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

About this site

European Site information

Name of European Site	The New Forest Special Area of Conservation (SAC)
Location	Hampshire, Wiltshire
Site Map	The designated boundary of this site can be viewed here on the MAGIC website
Designation Date	1 April 2005
Qualifying Features	See section below
Designation Area	29,262.36ha
Designation Changes	n/a
Feature Condition Status	Details of the feature condition assessments made at this site can be found using Natural England's Designated Sites System
Names of component Sites of Special Scientific Interest (SSSIs)	The New Forest SSSI, Lymington River SSSI, River Avon System SSSI, Landford Bog SSSI, Langley Wood and Homan's Copse SSSI, Loosehanger Copse and Meadows SSSI, Roydon Woods SSSI, Whiteparish Common SSSI, Norley Copse and Meadows SSSI.
Relationship with other European or International Site designations	The boundary of the New Forest SAC overlaps with New Forest SPA and River Avon SAC

Site background and geography

The New Forest falls within the New Forest National Character Area ([NCA Profile 131](#)) and embraces the largest area of 'unsown' vegetation in lowland England and includes the representation on a large scale of habitats formerly common but now fragmented and rare in lowland western Europe. The intimate mosaic of habitats owes much to the local geology and traditional commoning grazing system, a situation which is uncommon in lowland England.

The New Forest sits in the centre of a dip in the surrounding chalk known as the Hampshire Basin and comprises a series of eroded terraces of soft sedimentary clays and sands capped with flint gravel, brickearth and other superficial deposits. The Soils are mainly acid, poor in nutrients, susceptible to leaching and only slowly permeable with locally enriched areas. This great variation in its soils is reflected in the New Forest's distinctive vegetation.

The habitats include lowland heath, valley and seepage step mire, or fen, and ancient pasture woodland, including riparian and bog woodland and a range of acid to neutral grasslands. Nowhere else do these habitats occur in combination and on so large a scale. Outstanding examples of thirteen habitats of European interest are represented together with two priority habitat types, bog woodland and riverine woodland, these habitats support an exceptionally rich diversity of fauna and flora which for much of the site are dependent on traditional management practices of grazing through Rights of Common complemented by annual heathland burning and cutting programmes. These provide structural diversity and a range of niches for plants and animals to utilise.

With substantial development close by the Forest and within easy reach of two major urban areas it is estimated by the National Park Authority that the New Forest receives over 13 million day visits a year.

Much of the New Forest SAC has permissive public access and there are a wide range of activities including traditional countryside pursuits and sports events permitted by the landowners. Within the SAC are ten campsites providing 3,300 pitches, three 18 hole golf courses and a number of cricket pitches.

A small part of the site, Kingston Great Common, is declared as a [National Nature Reserve](#) managed by Natural England.

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:

- **H3110. Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*); 'Nutrient-poor shallow waters with aquatic vegetation on sandy plains'**

This type of waterbody is restricted to sandy plains that are acidic and low in nutrients, and are therefore very scarce. The water is typically very clear and moderately acid. Destruction of lowland heaths, land drainage and nutrient enrichment have contributed to the scarcity of the habitat type. The habitat type is characterised by the presence of *Littorelletalia*-type vegetation. Such vegetation is characterised by the presence of water lobelia *Lobelia dortmanna*, shoreweed *Littorella uniflora*, or quillwort *Isoetes lacustris*.

One of the three ponds at Hatchet Pond in the New Forest is an example of an oligotrophic waterbody amidst wet and dry lowland heath developed over fluvial deposits. It contains shoreweed *Littorella uniflora* and isolated populations of northern species such as bog orchid *Hammarbya paludosa* and floating bur-reed *Sparganium angustifolium*, alongside rare southern species such as Hampshire-purslane *Ludwigia palustris*. Hatchet Pond is therefore important as a southern example of this lake type where northern species, more common in the uplands of the UK, co-exist with southern species.

- **H3130. Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*; 'Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels'**

The clear soft water which characterises this habitat type contains low to moderate levels of plant nutrients and supports a characteristic assemblage of plant species. The vegetation community is characterised by amphibious short perennial vegetation, with shoreweed *Littorella uniflora* being considered as the defining component. This species often occurs in association with water lobelia *Lobelia dortmanna*, bog pondweed *Potamogeton polygonifolius*, quillwort *Isoetes lacustris*, bulbous rush *Juncus bulbosus*, needle spike-rush *Eleocharis acicularis*, alternate water milfoil *Myriophyllum alterniflorum* and floating water bur-reed *Sparganium angustifolium*. Yellow water-lily *Nuphar lutea*, amphibious bistort *Persicaria amphibia*, stoneworts *Chara* spp., least bur-reed *Sparganium natans* and other pondweeds *Potamogeton* spp. may be present in more mesotrophic conditions.

In the New Forest vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* occurs on the edge of large temporary ponds, shallow ephemeral pools and poached damp hollows in grassland, which support a number of specialist species in a zone with toad rush *Juncus bufonius*. These include the two nationally scarce species coral-necklace *Illecebrum verticillatum* and yellow centaury *Cicendia filiformis*, often in association with allseed *Radiola linoides* and chaffweed *Anagallis minima*. Heavy grazing pressure is of prime importance in the maintenance of the outstanding flora of these temporary pond communities. Livestock maintain an open habitat, controlling scrub ingress, and trampling the surface. Commoners' animals also transport seed in their hooves widely from pond to pond where suitable habitat exists. Temporary ponds occur throughout the Forest in depressions capable of holding water for part of the year. Most ponds are small (between 5-10 m across) and, although great in number, amount to less than 10 ha in total area.

- **H4010. Northern Atlantic wet heaths with *Erica tetralix*; 'Wet heathland with cross-leaved heath'**

Wet heath usually occurs on acidic, nutrient-poor substrates, such as shallow peats or sandy soils on impeded drainage. The vegetation is typically dominated by mixtures of cross-leaved heath *Erica tetralix*, heather *Calluna vulgaris*, grasses, sedges and *Sphagnum* bog-mosses

The New Forest contains the most extensive stands of lowland northern Atlantic wet heaths in southern England, mainly of the M16 *Erica tetralix* – *Sphagnum compactum* type. M14 *Schoenus nigricans* – *Narthecium ossifragum* mire is also found on this site. The wet heaths are important for rare plants, such as marsh gentian *Gentiana pneumonanthe* and marsh clubmoss *Lycopodiella inundata*, and a number of dragonfly species, including the scarce blue-tailed damselfly *Ischnura pumilio* and small red damselfly *Ceriatrigon tenellum*. There is a wide range of transitions between wet heath and other habitats, including dry heath, various woodland types, *Molinia* grasslands, fen, and acid grassland. Wet heaths enriched by bog myrtle *Myrica gale* are a prominent feature of many areas of the Forest. Unlike much lowland heath, the New Forest heaths continue to be extensively grazed by cattle and horses, favouring species with low competitive ability.

- **H4030. European dry heaths**

European dry heaths typically occur on freely-draining, acidic to circum-neutral soils with generally low nutrient content. Ericaceous dwarf-shrubs dominate the vegetation. The most common is heather *Calluna vulgaris*, which often occurs in combination with gorse *Ulex* spp., bilberry *Vaccinium* spp. or bell heather *Erica cinerea*, though other dwarf-shrubs are important locally. Nearly all dry heath is semi-natural, being derived from woodland through a long history of grazing and burning.

The New Forest represents European dry heaths in southern England and is the largest area of lowland heathland in the UK. It is particularly important for the diversity of its habitats and the range of rare and scarce species which it supports. The New Forest is unusual because of its long history of grazing in a traditional fashion by ponies and cattle. The dry heaths of the New Forest are of the H2 *Calluna vulgaris* – *Ulex minor* heath type, and H3 *Ulex minor* – *Agrostis curtisii* heath is found on damper areas. There are a wide range of transitions between dry heath and wet heath, *Molinia* grassland, fen, acid grassland and various types of scrub and woodland. Both the New Forest and the two Dorset Heath SACs are in southern England. All three areas are selected because together they contain a high proportion of all the lowland European dry heaths in the UK. There are, however, significant differences in the ecology of the two areas, associated with more oceanic conditions in Dorset and the continuous history of grazing in the New Forest.

- **H6410. *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); ‘Purple moor-grass meadows’**

Molinia meadows are found mainly on moist, moderately base-rich, peats and peaty gley soils, often with fluctuating water tables. They usually occur as components of wet pastures or fens, and often form mosaics with dry grassland, heath, mire and scrub communities. This habitat type includes the most species-rich *Molinia* grasslands in the UK, in which purple moor-grass *Molinia caerulea* is accompanied by a wide range of associated species, including rushes, sedges and tall-growing herbs. The New Forest represents *Molinia* meadows in southern England.

The site supports a large area of the heathy form of M24 *Molinia caerulea* – *Cirsium dissectum* fen-meadow. This vegetation occurs in situations of heavy grazing by ponies and cattle in areas known locally as ‘lawns’, often in a fine-scale mosaic with 4010 Northern Atlantic wet heaths and other mire and grassland communities. These lawns occur on flushed soils on slopes and on level terrain on the floodplains of rivers and streams. The New Forest *Molinia* meadows are unusual in the UK in terms of their species composition, management and landscape position. The grasslands are species-rich, and a particular feature is the abundance of small sedges such as carnation sedge *Carex panicea*, common sedge *C. nigra* and yellow-sedge *C. viridula* ssp. *oedocarpa*, and the more frequent occurrence of mat-grass *Nardus stricta* and petty whin *Genista anglica* compared to stands elsewhere in the UK.

- **H7140. Transition mires and quaking bogs; ‘Very wet mires often identified by an unstable ‘quaking’ surface’**

The term ‘transition mire’ relates to vegetation that in floristic composition and general ecological characteristics is transitional between acid bog and 7230 Alkaline fens, in which the surface conditions range from markedly acidic to slightly base-rich. The vegetation normally has intimate mixtures of species considered to be acidophile and others thought of as calciphile or basophile.

In some cases the mire occupies a physically transitional location between bog and fen vegetation, as for example on the marginal lagg of raised bog or associated with certain valley and basin mires. In other cases these intermediate properties may reflect the actual process of succession, as peat accumulates in groundwater-fed fen or open water to produce rainwater-fed bog isolated from groundwater influence.

- **H7150. Depressions on peat substrates of the *Rhynchosporion***

Depressions on peat substrates of the *Rhynchosporion* occur in complex mosaics with lowland wet heath and valley mire vegetation, in transition mires, and on the margins of bog pools and hollows in both raised and blanket bogs. The vegetation is typically very open, usually characterised by an abundance of white beak-sedge *Rhynchospora alba*, often with well-developed algal mats, the bog moss *Sphagnum denticulatum*, round-leaved sundew *Drosera rotundifolia* and, in relatively base-rich sites, brown mosses such as *Drepanocladus revolvens* and *Scorpidium scorpioides*. The Nationally scarce species brown beak-sedge *Rhynchospora fusca* and marsh clubmoss *Lycopodiella inundata* also occur in this habitat.

The New Forest, one of three sites selected in southern England, is considered to hold the largest area in England of Depressions on peat substrates of the *Rhynchosporion*, in complex habitat mosaics associated primarily with the extensive valley bogs of this site. The habitat type is developed in three situations: in natural bog pools of patterned bog surfaces, in flushes on the margins of valley mires and in areas disturbed by peat-digging, footpaths, tracks, ditches etc. In places the habitat type is rich in brown mosses *Cratoneuron* spp. and *Scorpidium scorpioides*, suggesting flushing by mineral-rich waters. The mosaics in which this habitat type occurs are an important location for bog orchid *Hammarbya paludosa*

- **H7230. Alkaline fens; ‘Calcium-rich spring water-fed fens’**

Alkaline fens consist of a complex assemblage of vegetation types characteristic of sites where there is tufa and / or peat formation with a high water table and calcareous base-rich water supply. There is considerable variation between sites in the associated communities and the transitions that may occur. Such variation can be broadly classified by the geomorphological situation in which the fen occurs, namely: flood plain mire, valley mire, basin mire, hydroseral fen (i.e. as zones around open waterbodies) and spring fen.

- **H9120. Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*); ‘Beech forests on acid soils’**

This habitat comprises beech *Fagus sylvatica* forests with holly *Ilex*, growing on acid soils, in a humid Atlantic climate. Sites of this habitat type often are, or were, managed as wood-pasture systems, in which pollarding of beech and oak *Quercus* spp. was common. This is known to prolong the life of these trees. Typical species include holly *Ilex aquifolium*, bracken *Pteridium aquilinum* and bramble *Rubus fruticosus*, with wavy hair-grass *Deschampsia flexuosa* in the most acidic areas. Epiphyte richness can a key factor in defining hyper-Atlantic forms of this Annex I type.

The New Forest is the largest area of mature, semi-natural beech *Fagus sylvatica* woodland in Britain and represents Atlantic acidophilous beech forests in the most southerly part of the habitat's UK range. The mosaic with other types of woodland and heath has allowed unique and varied assemblages of epiphytic lichens and saproxylic invertebrates to be sustained, particularly in situations where the woodland is open and the tree trunks receive plenty of light. The traditional common grazing in the Forest by cattle and ponies provides opportunities to explore the impact of large herbivores on the woodland system

- **H9130. *Asperulo-Fagetum* beech forests; Beech forests on neutral to rich soils**

This Annex I type occurs on circumneutral to calcareous soils. UK stands of *Asperulo-Fagetum* beech forest belong to the central and northern European associations of the habitat but with correspondingly more Atlantic species, including holly *Ilex aquifolium* and bluebell *Hyacinthoides non-scripta*. Rare plants

associated with this form of woodland in the UK include red helleborine *Cephalanthera rubra*, wood barley *Hordelymus europaeus*, coral-root *Cardamine bulbifera* and box *Buxus sempervirens*. While many sites have a core of ancient woodland, planting of beech *Fagus sylvatica* and its natural spread on to adjacent grassland under reduced grazing pressures have led in places to an expansion of this habitat over the 20th century. Sites therefore often have a complicated history. The beech dominance in particular has often been emphasised by past silvicultural treatment.

The New Forest is the largest area of mature, semi-natural beech *Fagus sylvatica* woodland in Britain; much of it is a form of W14 *Fagus sylvatica* – *Rubus fruticosus* woodland that conforms to the Annex I type *Asperulo-Fagetum* beech forests. The mosaic with other types of woodland and heath has allowed unique and varied assemblages of epiphytic lichens and saproxylic invertebrates to be sustained, particularly in situations where the woodlands are open and the tree trunks receive plenty of light. The traditional common grazing in the Forest by cattle and ponies provides opportunities to explore the impact of large herbivores on the woodland system.

- **H9190. Old acidophilous oak woods with *Quercus robur* on sandy plains**

This habitat type comprises ancient lowland oak woodland on acidic, sandy or gravelly substrates. Veteran trees are relatively abundant in UK stands compared to examples in continental Europe, and are often associated with assemblages of notable lichens, fungi and invertebrates.

The New Forest is representative of old acidophilous oak woods in the southern part of its UK range. It is the most extensive area of active wood-pasture with old oak *Quercus* spp. and beech *Fagus sylvatica* in north-west Europe and has outstanding invertebrate and lichen populations. This site was preferred over other sites that lack a succession of age-classes because, although scattered over a wide area, the oak stands are found within a predominantly semi-natural landscape with a more balanced age-structure of trees. The traditional common grazing in the Forest by cattle and ponies provides opportunities to explore the impact of large herbivores on the woodland system. The New Forest has been identified as of potential international importance for its saproxylic invertebrate fauna by the [Council of Europe](#) (Speight 1989).

- **H91D0. Bog woodland*** (priority feature)

Under certain combinations of physical circumstances in the UK, scattered trees can occur across the surface of a bog in a relatively stable ecological relationship as open woodland, without the loss of bog species. This true Bog woodland is a much rarer condition than the progressive invasion of bogs by trees, through natural colonisation or afforestation following changes in the drainage pattern which leads eventually to the loss of the bog community. The habitat type has not previously been well described in the UK, and consequently knowledge of its ecological characteristics is limited

Within the New Forest, in southern England, birch – willow *Betula* – *Salix* stands occur over valley bog vegetation, with fringing alder *Alnus* – *Sphagnum* stands where there is some water movement. These stands appear to have persisted for long periods in stable association with the underlying *Sphagnum* bog-moss communities. The rich epiphytic lichen communities and pollen record provide evidence for the persistence of this association. The Bog woodland occurs in association with a range of other habitats for which the site has also been selected.

- **H91E0. Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae); ‘Alder woodland on floodplains’ * (priority feature)**

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) comprises woods dominated by alder *Alnus glutinosa* and willow *Salix* spp. on flood plains in a range of situations from islands in river channels to low-lying wetlands alongside the channels.

The habitat typically occurs on moderately base-rich, eutrophic soils subject to periodic inundation. Many such woods are dynamic, being part of a successional series of habitats. Their structure and function are best maintained within a larger unit that includes the open communities, mainly fen and swamp, of earlier successional stages. On the drier margins of these areas other tree species, notably ash *Fraxinus excelsior* and elm *Ulmus* spp., may become abundant. In other situations the alder woods occur as a stable component within transitions to surrounding dry-ground forest, sometimes including other Annex I woodland types. These transitions from wet to drier woodland and from open to more closed communities provide an important facet of ecological variation.

The ground flora is correspondingly varied. Some stands are dominated by tall herbs, reeds and sedges, for example common nettle *Urtica dioica*, common reed *Phragmites australis*, greater tussock-sedge *Carex paniculata*, and meadowsweet *Filipendula ulmaria*, while others have lower-growing communities with creeping buttercup *Ranunculus repens*, common marsh bedstraw *Galium palustre*, alternate-leaved golden-saxifrage *Chrysosplenium oppositifolium* and marsh-marigold *Caltha palustris*.

The New Forest contains many streams and some small rivers that are less affected by drainage and canalisation than those in any other comparable area in the lowlands of England. Associated with many of the streams, particularly those with alkaline and neutral groundwater, are strips of alder *Alnus glutinosa* woodland which, collectively, form an extensive resource with a rich flora. In places there are examples of transitions from open water through reedswamp and fen to alder woodland. The small rivers show natural meanders and debris dams, features that are otherwise rare in the lowlands, with fragmentary ash *Fraxinus excelsior* stands as well as the alder strips.

Qualifying Species:

- **S1044. *Coenagrion mercuriale*; Southern damselfly**

The southern damselfly *Coenagrion mercuriale* has very specialised habitat requirements, being confined to shallow, well-vegetated, base-rich runnels and flushes in open areas or small side-channels of chalk rivers. Most sites are on wet heath.

The dragonfly's larvae live in flushes and shallow runnels, often less than 10 cm deep, with slow-flowing water. Adults fly from June to August. Females lay eggs onto submerged plants, and the predatory aquatic larvae probably take two years to mature

The New Forest in central southern England is an outstanding locality for this species, with several population centres and strong populations estimated to be in the hundreds or thousands of individuals and with a long history of records. With Preseli, Dorset Heaths and the River Itchen, it represents one of the four major population centres in the UK.

- **S1083. *Lucanus cervus*; Stag beetle**

The stag beetle *Lucanus cervus* is the UK's largest terrestrial beetle, and amongst the most spectacular, reaching 7 cm in length. Larvae develop in decaying tree stumps and fallen timber of broad-leaved trees in contact with the ground, especially of apple *Malus* spp., elm *Ulmus* spp., lime *Tilia* spp., beech *Fagus sylvatica* and oak *Quercus* spp. Such timber is an essential feature for conservation of structure and function of the habitat for this species. Development takes around 3-4 years. Adults are active on warm evenings, but probably only the males fly regularly and come readily to lights. Adults have been recorded from May to September or even October, though they are most abundant in early summer

The New Forest represents stag beetle *Lucanus cervus* in its Hampshire/Sussex population centre, and is a major stronghold for the species in the UK. The forest is one of the most important sites in the UK for fauna associated with rotting wood, and was identified as of potential international importance for its saproxylic invertebrate fauna by the [Council of Europe](#) (Speight 1989).

- **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.

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 2017 (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.

Table 1: Supplementary Advice for Qualifying Features: H3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletia uniflorae* and/or of the *Isoëto-Nanojuncetea* and H3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<p>Extent and distribution of the feature</p> <p>(H3130 and H3110)</p>	<p>Extent of the feature within the site</p>	<p>Restore the total extent of the feature H3110 at 6.7 hectares.</p> <p>Maintain the total extent of the feature H3130 at c10 hectares.</p>	<p>There should be no measurable net reduction (excluding any trivial loss) in the extent and area of this feature, and in some cases, the full extent of the feature may need to be restored.</p> <p>The baseline-value of extent given has been generated using data gathered from the listed site-based surveys. Area measurements given may be approximate depending on the methods, age and accuracy of data collection, and as a result this value may be updated in future to reflect more accurate information.</p> <p>The extent of an Annex I habitat feature covers the sum extent of all of the component vegetation communities present and may include transitions and mosaics with other closely-associated habitat features. Where a feature is susceptible to natural dynamic processes, there may be acceptable variations in its extent through natural fluctuations.</p> <p>Where a reduction in the extent of a feature is considered necessary to meet the Conservation Objective for another Annex I feature, Natural England will advise on this on a case-by-case basis.</p> <p>Within the New Forest SAC, the feature H3110 is limited to the main lake at Hatchet Pond.</p> <p>Feature H3130 relates to large temporary ponds, shallow ephemeral pools and poached damp hollows. They are relatively small (between 5-10m across) and as they have not yet been mapped in detail, the full extent is likely to have been underestimated</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature (H3130 Only)	Spatial distribution of the feature within the site	Maintain the distribution and configuration of the feature, including where applicable its component vegetation types, across the site	<p>A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes. This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat.</p> <p>The feature occurs in every habitat type and on every type of geology within the Forest and as a result show a huge diversity of pond types which in turn supports an exceptionally varied and rich community of freshwater plants and animals</p>	Ewald N, Dunn F, Williams P and Biggs J, 2014
Structure and function (including its typical species) (H3110 Only)	Fisheries	Restore a total projected estimate for biomass of total fish production at less than 200kg/ha (this should take into account the growth potential of the resident and stocked fish).	<p>Fish communities may exert a strong influence on overall lake ecology and may cause or exacerbate eutrophication symptoms. Where fisheries are present it should be a balanced mixed fishery. There should be a presumption against stocking non-native species, Common carp <i>Cyprinus carpio</i> and Common Bream <i>Abramis brama</i>.</p> <p>Eight species of fish have been recorded from Hatchet Pond; Northern Pike <i>Esox lucius</i>, European Perch <i>Perca fluviatilis</i>, Common Roach <i>Rutilus rutilus</i>, Eurasian Ruffe <i>Gymnocephalus cernuus</i>, Common Bream <i>Abramis brama</i>, Tench <i>Tinca tinca</i>, Common Carp <i>Cyprinus carpio</i>, Mirror Carp <i>Cyprinus carpio</i> and Common Eel <i>Anguilla anguilla</i>. - The minimum biomass present is estimated to be 159.3 kg/ha, although the actual fish stock was surmised to be above 200 kg/ ha.</p> <p>Hatchet Pond, whilst not actively stocked, is managed as a coarse fishery including Common/Mirror carp <i>Cyprinus carpio</i> and Common Bream <i>Abramis brama</i>. The common practice of ground baiting, which is popular with carp anglers, can introduce nutrients and there may also be deliberate extra feeding to encourage growth of specimen sized fish. In addition, benthivorous (bottom-feeding) fish contribute to high turbidity and algal biomass through their feeding habits.</p>	<p>Giles, N. 2002</p> <p>Harwood, A., Tomlinson, M. & Perrow, M.2017</p> <p>Aquilina R, Ewald N, Biggs J. 2015</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Changes recorded at Hatchet Pond are indicative of the early stages of eutrophication and algal growth is thought to have driven a decline in aquatic flora.	
Structure and function (including its typical species) (H3130 and H3110)	Functional connectivity/ isolation	<p>Maintain the natural lack of connectivity of H3130 water bodies to other water bodies</p> <p>Restore the connectivity of Hatchet Pond (H3110) to Hatchet Stream</p>	<p>The natural isolation of many of the New Forest temporary ponds can provide some protection from threats such as pollution and invasive species. Hydrological isolation can also lead to unique or diverse species assemblages this may be due to genetic isolation or the absence of predators.</p> <p>These water bodies should have their isolated state maintained.</p> <p>In contrast other standing water bodies naturally rely on hydrological connectivity to other freshwater systems for water supply, and can support migratory species. The European eel <i>Anguilla anguilla</i> is a native species and is in serious decline. Obstruction created by a sluice structure is preventing Eel <i>Anguilla anguilla</i> passage upstream into Hatchet Pond</p> <p>Hydrological connectivity may also be important for geneflow, and habitat and species resilience. These water bodies should have their hydrological connectivity maintained</p>	
Structure and function (including its typical species) (H3130 and H3110)	Hydrology	At a site, unit and/or catchment level maintain natural hydrological processes to provide the conditions necessary to sustain the feature within the site	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature.</p> <p>Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts.</p> <p>Hydrology influences lake ecosystem functioning in two ways: determining residence time (flushing) and water level fluctuations. Flushing of lakes is important for dilution and removal of nutrients and phytoplankton, and for reduction in</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>sedimentation. The timing of different flushing rates within the year influences the biology of the lake. For example, reduced flushing in summer would encourage bloom conditions.</p> <p>Modifications of inflows and outlets or changes in hydrology, e.g. from flood control regimes, abstraction and gravel removal can lead to unnatural changes in lake levels.</p>	
Structure and function (including its typical species) (H3130 and H3110)	Invasive, non-native and/or introduced species	Ensure non-native species categorised as 'high-impact' in the UK under the Water Framework Directive are either rare or absent but if present are causing minimal damage to the feature	<p>Non-native species constitute a major threat to many open water systems. Impacts may be on the habitat itself (e.g. damage to banks and consequent siltation) or directly on characteristic biota (through predation, competition and disease), or a combination of these.</p> <p>The UK Technical Advisory Group of the Water Framework Directive produces a regularly updated classification of aquatic alien species (plants and animals) according to their level of impact.</p> <p>In general high impact species are of greatest concern but low or unknown impact species may be included in the target on a site-specific basis where there is evidence that they are causing a negative impact (for example high cover values or abundances). Those taxa considered likely to colonise lakes, are indicated by an 'L' in the UKTAG guidance. Examples of such high-impact species may include Water Fern <i>Azolla filiculoides</i>, New Zealand pygmyweed <i>Crassula helmsii</i> and the zebra mussel <i>Dreissena polymorpha</i>.</p> <p>New Zealand pygmyweed <i>Crassula helmsii</i> is present in many permanent and temporary ponds throughout the New Forest and poses a threat to the native flora due to a shared ecological niche with many New Forest rarities such as <i>Pilularia globulifera</i>. Colonisation of a pond is followed by rapid growth creating a blanket cover which out-competes the native flora.</p> <p>In 2009/ 2010 a total of 579 ponds were surveyed, approximately 60% of the New Forest resource, of these 20% contained <i>C. helmsii</i>, and was distributed in a distinct pattern associated with public access which suggests that the primary route of</p>	<p>Ewald, N.C. 2014</p> <p>Natural England 2014</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>introduction is likely to be accidental or deliberate release by people or where vehicles and/ or equipment have been used which are likely to have come from an infected site.</p> <p>No effective method is currently available to eradicate the plant but grazing pressure, which is an essential element of the management of these ponds for rare and threatened native species is also critical in limiting the dominance of <i>C. helmsii</i>.</p>	
Structure and function (including its typical species) (H3130 and H3110)	Key structural, influential and/or distinctive species	<p>Restore the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature;</p> <p>Structural The characteristic species of H3110 and H3130 water bodies which may include; <i>Littorella uniflora</i>, <i>Isoetes lacustris</i>, <i>Isoetes echinospora</i>, <i>Lobelia dortmanna</i>, <i>Sparganium angustifolium</i>, <i>Luronium natans</i>,</p> <p>The constant and preferential plants of the NVC community types which forms key components of the SAC habitats present include <i>Littorella uniflora</i>, <i>Isoetes lacustris</i>, <i>Isoetes echinospora</i>, <i>Lobelia dortmanna</i>, <i>Eleogiton fluitans</i>, <i>Elatine hexandra</i>, <i>Myriophyllum alterniflorum</i>, <i>Apium inundatum</i>, <i>Luronium natans</i>, <i>Nitella flexilis agg spp</i>, , <i>Radioal lonoides</i>, <i>Anagallis minima</i>,</p> <p>Influential Grazing herbivores</p>	<p>Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include;</p> <ul style="list-style-type: none"> • Structural species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). • Influential species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat) • Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. <p>There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary.</p> <p>The list of species given here for the Annex I habitat features at this SAC is not necessarily exhaustive.</p> <p>The majority of the New Forest ponds are of exceptional importance of wildlife and at a landscape scale support at least 94 wetland plant species, 41 invertebrate families and 68 species</p>	Ewald N., Dunn F., Williams P. and Biggs J., 2014

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p>Site-distinctive</p> <p><i>Pilularia globulifera</i>, <i>Baldellia ranunculoides</i>, <i>Illecebrum verticillatum</i>, <i>Ranunculus x novae-forestae</i>, <i>Utricularia intermedia</i>, <i>Galium constrictum</i>, <i>cicendia filiformis</i>, <i>Mentha pulegium</i>, <i>Ludwigia palustris</i></p> <p>Tadpole Shrimp <i>Triops cancriformis</i>, fairy Shrimp <i>Chirocephalus diaphanous</i>, ne-grooved diving beetle <i>Bidessus unistriatus</i> (may now be extinct), medicinal leech <i>Hirudo medicinalis</i>, pond mud snail <i>Omphiscola glabra</i></p>	<p>of aquatic Coleoptera. This includes 21 plant species of conservation concern (Locally Common, Red Data Book or S41 species) and 13 beetle species of conservation concern (Nationally Scarce or IUCN Red List species).</p> <p>Hatchet Pond (H3110) supports 133 wetland plant species - more than a third of all the wetland plant species found in the UK and 99 species of freshwater macro-invertebrate species have been recorded, including eight species of conservation importance.</p> <p>Heavy grazing pressure is of prime importance in the maintenance of the outstanding flora and invertebrate interest of the pond communities in the New Forest</p> <p>The list may evolve, and species may be added or deleted, as new information about this site becomes available.</p>	
Structure and function (including its typical species) (H3130 and H3110)	Macrophyte community structure	<p>For H3130 Maintain a characteristic zonation of macrophytes, with increasing depth, represented by <i>Littorella uniflora</i> then with overlapping zones of <i>Littorella uniflora</i> with <i>Lobelia dortmana</i> then <i>Isoetes</i> spp.</p> <p>For H3110: Restore maximum depth of plant colonisation. This will often be the maximum depth colonised by <i>Isoetes</i>, but in richer waters maximum depth of <i>Potamogeton</i> spp. is also important.</p>	<p>This is a strongly characteristic structural aspect of this habitat feature. It will be a response to water transparency, sediment type and disturbance.</p> <p>Although Hatchet Pond (H3110) is relatively species rich (15 aquatic species recorded in 2011 and 2009), the majority of aquatic macrophytes are rather rare within the lake; most being restricted to either very shallow water (<25 cm) or confined to the wetland area around the north-east of the site</p>	Burgess, A, Goldsmith, B and Goodrich, S., 2014
Structure and	Macrophyte	Restore a characteristic and well	A hydrosere is a naturally-occurring plant succession which	Burgess, A, Goldsmith,

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
function (including its typical species) (H3130 and H3110)	community structure	<p>defined hydrosere associated with the H3110 water body</p> <p>Maintain a characteristic and well defined hydrosere associated with the H3130 water bodies where this is present</p>	<p>occurs in an area of standing fresh water. Over time, an area of open freshwater will naturally dry out, ultimately becoming woodland. During this change, a range of different wetland habitat types such as swamp and marsh, will succeed each other. This structure around the margins of the lake creates a buffer zone that can help protect the lake from a limited amount of sediment and nutrient inputs. It also increases habitat heterogeneity providing additional food sources and refugia.</p> <p>Poaching the shoreline by ponies and cattle is essential to the maintenance of the H3110 habitat. Away from areas popular for recreation, the marginal habitats of Hatchet Pond are heavily grazed and of considerable interest.</p> <p>However, the aquatic community structure shows little obvious zonation apart from the North East shore which has a more extensive hydrosere with dense growths of <i>M. trifoliata</i> & <i>Ludwigia palustris</i>.</p> <p>Many of the H3130 ponds are temporary or have wide, shallow drawdown zones – an area of mud and vegetation which is flooded in winter and spring and progressively dries as water levels fall in summer providing ideal conditions for a number of rare plants and invertebrates</p>	B and Goodrich, S., 2014
Structure and function (including its typical species) (H3110 only)	Macrophyte community structure	<p>Restore characteristic zonations of vegetation with increasing depth, represented by <i>Littorella uniflora</i> then with overlapping zones of <i>Littorella uniflora</i> with <i>Lobelia dortmana</i> then <i>Isoetes</i> spp.</p>	<p>This is a strongly characteristic structural aspect of this habitat feature. It will be a response to water transparency, sediment type and disturbance.</p> <p>Although poaching of the shoreline by ponies and cattle is essential to the maintenance of the H3110 habitat, much of the shoreline suffers from erosion and disturbance from high visitor numbers and shore angling. Despite having areas of good marginal habitat, the aquatic flora is rather sparse, lacking the zonation and depth distribution expected from this site type.</p> <p><i>L. uniflora</i> does not exceed 25cm depth and does not form the dense lawns normally associated with this species.</p>	Burgess, A, Goldsmith, B and Goodrich, S., 2014
Structure and	Physical	Maintain the natural shorelines of	Inclusion of hard engineering solutions to lake management may	Burgess, A, Goldsmith,

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
function (including its typical species) (H3130 and H3110)	structure - lake shoreline	the lake and ponds.	<p>have detrimental effects on lake ecology, replacing near-natural substrates with man-made materials. Alteration of the shoreline may also result in changes in water movements within the lake, which would have effects on patterns of sediment deposition.</p> <p>Much of the shoreline of Hatchet Pond (H3110) suffers from erosion and disturbance from high visitor numbers and shore angling</p>	B and Goodrich, S., 2014
Structure and function (including its typical species) (H3130 and H3110)	Physical structure - lake substrate	<p>For H3130: Maintain the natural and characteristic substrate for the lake. Substrate is typically sand, gravel, stones and boulders with low organic content, but there may be a locally high peat content.</p> <p>For H3110: Restore the natural and characteristic substrate for the lake. Substrate is typically sand, gravel and stones with low organic content, <5% loss on ignition.</p>	The distribution of sediment particle size and organic content influences the biology of the lake and will affect the suitability of within-lake habitats for invertebrates and macrophytes, and fish spawning grounds. Increases in sediment loading from activities in the catchment area, including those on the lake shore, may result in the smothering of coarse sediments. Increased inputs of leaf litter, as a result of scrub encroachment, may also be cause for concern, as organic-rich sediments may be a poor rooting medium for macrophytes.	
Structure and function (including its typical species) (H3130 and H3110)	Sediment load	<p>For H3130 Maintain the natural sediment load</p> <p>For H3110 Restore the natural sediment load</p>	<p>Increased sediment loadings may result in clogging of the lake bed, increased siltation in the basin and deoxygenation of sediments. Blockage of coarser substrates with finer sediment restricts water flow-through, whilst increases in organic matter increase biochemical oxygen demand. Examples of causes of increases in siltation include: increased lake productivity, changes in catchment land-use (particularly over-grazing), lake level fluctuations or climatic fluctuations.</p> <p>Surveys over the last twenty years have noted increasing amounts of suspended silts in Hatchet Pond (H3110) the likely causes are bottom-feeding fish such as carp, bream and tench and increased recreation</p>	Aquilina R, Ewald N, & Biggs J. 2015.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species) (H3130 and H3110)	Supporting off-site habitat	Restore the extent, quality and spatial configuration of land or habitat surrounding or adjacent to the site which is known to support the features	<p>The structure and function of the qualifying habitat, including its typical species, may rely upon the continued presence of areas which surround and are outside of the designated site boundary.</p> <p>Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species. This supporting habitat may be critical to the typical species of the feature to support their feeding, breeding, roosting, population dynamics ('metapopulations'), pollination or to prevent/reduce/absorb damaging impacts from adjacent land uses e.g. pesticide drift, nutrient enrichment.</p> <p>For H3110 - The passage of common eels upstream into Hatchet Pond are being restricted by a sluice</p> <p>For H3130 - Ponds are at risk from inputs and runoff from land adjacent to the SAC</p>	
Structure and function (including its typical species)	Water quality - acidity	<p>For H3130: Acidity levels should reflect unimpacted conditions, typically a pH of 5.5-7.0 for oligotrophic lakes and 7.0-8.0 for mesotrophic lakes.</p> <p>For H3110 Acidity levels should reflect unimpacted conditions, typically with a pH value < 7.</p>	<p>Changes in pH can alter the entire freshwater community present within a water body affecting all trophic levels. Potential causes of a shift in pH include air pollution and direct application of lime to the water column as an acidification amelioration strategy (this should not be carried out).</p> <p>Acidity levels should reflect unimpacted conditions - values of Acid Neutralising Capacity (ANC) considered to avoid significant impact on characteristic biota are laid out in the site's FCT (these are the same numerical values as used to protect high ecological status under the WFD in the UK).</p> <p>As a guide, pH 5.5-7.0 for oligotrophic lakes and 7.0-8.0 for mesotrophic lakes. Although, pH naturally fluctuates throughout the year, e.g. snow melt may lead to pulses of acid water, and increased plant biomass in summer may result in large fluctuations in pH, including daytime increases in pH values. Therefore pH is not used as a monitoring target, however its importance in affecting many in lake processes means that the pH of a water body should not be artificially altered.</p>	Aquilina R, Ewald N, & Biggs J. 2015.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Evidence indicates a significant increase of 0.86 pH units between 1979 and 2014 at Hatchet Pond (H3110)	
Structure and function (including its typical species) (h3130 and H3110)	Water quality - algae	Restore chlorophyll a concentrations to WFD high ecological status; blooms of blue-green or green algae should not occur in low nutrient waters.	<p>Chlorophyll is the pigment used for photosynthesis by plants, and the concentration of chlorophyll in the water column during the growing season therefore provides a good measure of the abundance of phytoplankton. Phytoplankton is an important driver of structure and function in lakes and high phytoplankton levels (algal blooms) are usually associated with nutrient enrichment.</p> <p>Dense growths of tufted algae may grow on hard substrates where other plants have difficulty establishing, such as on boulders or cobbles. On the whole this is not a cause for concern. However, formation of floating algal rafts or macrophytes being overgrown with filamentous algae is a cause for concern.</p> <p>UKTAG Lake Assessment Methods: Phytoplankton. Chlorophyll a and Percentage Nuisance Cyanobacteria. Available online at: http://www.wfduk.org/sites/default/files/Media/Characterisation%20of%20the%20water%20environment/Biological%20Method%20Statements/lake%20phytoplankton.pdf</p> <p>There is evidence of abundance of algae in some sections of Hatchet Pond (H3110). Between 2009 and 2014 chlorophyll a concentration has been generally high for an oligotrophic site, prior to 2009 the concentrations were lower</p>	Burgess, A, Goldsmith, B and Goodrich, S., 2014
Structure and function (including its typical species) (h3130 and h3110)	Water quality - dissolved oxygen	Maintain adequate dissolved oxygen (DO) levels for health of characteristic fauna; DO>7mg/l for salmonid waters and >6mg/l for cyprinid waters throughout the year.	<p>As for species in terrestrial environments, dissolved oxygen (DO) is required for respiration by aquatic organisms. Anthropogenic activities leading to phytoplankton blooms and increased loadings of organic matter to lakes can cause decreases in the concentration of dissolved oxygen available to support the species present.</p> <p>Mean dissolved oxygen refers to DO being measured at 0.5m intervals throughout the entire water column where the water column is not stratified and measurements taken at 0.5 m intervals below the thermocline only where stratification occurs.</p>	Burgess, A, Goldsmith, B and Goodrich, S., 2014

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			The dissolved oxygen profile for Hatchet Pond (H3110) in 2011 was 8.93 mg/l which is adequate for cyprinid waters.	
Structure and function (including its typical species) H3130 and h3110	Water quality - nitrogen	Maintain a stable nitrogen concentration which is typically within 1-2mg/l	<p>There is an increasing understanding that some standing waters are sensitive to nitrogen (N) enrichment and eutrophication may be driven by increases in N, but site-specific information is usually required to determine whether N or P is more important.</p> <p>Where P levels are significantly above their target values and there is evidence that the lake is N limited (for example by N levels falling to negligible levels in summer), N targets should be set in addition to P targets.</p> <p>We recommend that such targets should preferably be developed using site-specific information, but should be based around the threshold of 1-2mg/l identified by James et al. (2005). In this situation N targets should be used in combination with P targets to drive a management strategy for the lake that reduces all nutrient inputs.</p> <p>In 2014, total nitrogen in Hatchet Pond (H3110) was below the threshold at 0.66 mg/l</p>	Aquilina R, Ewald N, & Biggs J. 2015.
Structure and function (including its typical species) (H3130 and H3110)	Water quality - other pollutants	Maintain Good chemical status (i.e. compliance with relevant Environmental Quality Standards).	A wide range of pollutants may impact on habitat integrity depending on local circumstance. Good chemical status includes a list of EQSs for individual pollutants that are designed to protect aquatic biota with high levels of precaution.	
Structure and function (including its typical species) (H3130 and H3110)	Water quality - phosphate	<p>For H3130: Maintain stable nutrient levels appropriate for lake type. The maximum annual mean concentration of TP is typically 10 µg P l-1 for oligotrophic lakes and 20 µg P l-1 for shallow (<3m) mesotrophic lakes. These should be met unless site specific targets are available.</p> <p>For H3110: Restore stable</p>	<p>If palaeolimnological techniques or hindcast modelling have been employed to reconstruct natural background phosphorus concentrations for a particular lake, these can be used to set targets, although it may be necessary to accept a small deviation from these background conditions. Alternatively, historical water chemistry data may exist for individual lakes.</p> <p>Where existing, site-specific water column TP concentrations are consistently lower than the standard appropriate for the habitat type, a lower target should be applied to prevent deterioration from current status.</p>	Aquilina R, Ewald N, & Biggs J. 2015.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		nutrient levels appropriate for lake type. The site specific maximum annual mean concentration of TP is 17 µg P l-1 for Hatchet Pond.	<p>Increased loadings of P to a water body are likely to lead to higher algal biomass in the water column, which in turn can have significant impacts on the standing water ecosystem through, for example, competition with vascular plants for nutrients and light, changes in pH, oxygen depletion and production of toxins.</p> <p>Decreasing dissolved oxygen and increasing ammonia levels are associated with death and decay of algal blooms, as is a release of toxins from toxin-producing species</p> <p>The water quality of Hatchet Pond (H3110) is deteriorating based on long-term increases in diatom reconstructed phosphorus concentrations, changes in Soluble Reactive Phosphorus 1979 - 1983 and, more recently (post 2008), on measured total phosphorus values. These changes indicate the early stages of eutrophication.</p> <p>Hatchet Pond is located within a largely semi-natural habitat with no obvious sources of nutrient contribution. Nutrients and sediment sources are direct or indirect inputs to the lake from recreation.</p>	
Structure and function (including its typical species) (H3130 and H3110)	Water transparency	<p>For H3130: Maintain the clarity of water at or to at least a depth of 3.5 metres</p> <p>For H3110: Restore the clarity of water at or to at least a depth of 3.5 metres</p>	<p>Water clarity or transparency is the major determinant of the depth of colonisation by macrophytes, therefore, it should not be reduced.</p> <p>This should allow plant colonization to at least 3.5m, but if maximum depth of colonization has previously been recorded at greater water depths this should be maintained. Increased nutrient loads leading to increased algal growth will reduce water transparency, disturbance of the sediment by water sports and bottom feeding fish such as Common carp <i>Cyprinus carpio</i> and Common Bream <i>Abramis brama</i> also increase turbidity and reduce water transparency. Increased sediment loads to a lake would also have this effect.</p> <p>Hatchet Pond (H3110) suffers from high turbidity which has restricted the growth of characteristic species to very shallow water. Sources of the turbidity are likely to be:</p>	Aquilina R, Ewald N, & Biggs J. 2015.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<ul style="list-style-type: none"> • Bottom-feeding fish such as Common carp <i>Cyprinus carpio</i>, Common Bream <i>Abramis brama</i> and, to a lesser extent, Tench <i>Tinca tinca</i> which disturb plants and sediment leading to the loss of vascular plants. Re-suspension of pond substrate will cause previously bound phosphates to be re-dissolved in the water column. • Disturbance and re-suspension of sediments by dog activity in proximity to the car park • Erosion and sediment run off from the car park and tracks adjacent to the lake 	
Supporting processes (on which the feature relies) (H3130 and H3110)	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for these features of the site on the Air Pollution Information System (www.apis.ac.uk).	<p>This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it.</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 (NH₃), oxides of nitrogen (NO_x) 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.</p> <p>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.</p> <p>As part of the preparation of local plans by NFNPA and NFDC a detailed examination of potential in-combination air quality</p>	<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 (www.apis.ac.uk).</p> <p>Natural England 2014,</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			effects on New Forest SAC / SPA, and other nearby European sites has been carried out. Third party consultants have carried out an air quality assessment and linked ecological assessment which together constitute the HRA of air quality effects for both the New Forest National Park and New Forest District Local Plans. At the time of writing, these documents had not yet been finalised although draft results and conclusions are presented within them.	
Supporting processes (on which the feature relies) (h3110 only)	Hydrology	At a site, unit and/or catchment level as necessary, maintain natural hydrological processes to provide the conditions necessary to sustain the feature within the site	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature.</p> <p>Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts. Hydrology influences lake ecosystem functioning in two ways: determining residence time (flushing) and water level fluctuations.</p> <p>Flushing of lakes is important for dilution and removal of nutrients and phytoplankton, and for reduction in sedimentation. The timing of different flushing rates within the year influences the biology of the lake. For example, reduced flushing in summer would encourage bloom conditions. Modifications of inflows and outlets or changes in hydrology, e.g. from flood control regimes, abstraction and gravel removal can lead to unnatural changes in lake levels.</p> <p>Although Hatchet Pond is artificial in origin, the water levels are not managed artificially and fluctuate naturally.</p>	
Version Control Advice last updated: n/a				
Variations from national feature-framework of integrity-guidance: n/a				

Table 2: Supplementary Advice for Qualifying Features: H4010. Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	<p>Maintain the total current extent of the H4010 feature at c2100 hectares.</p> <p>Restore the total extent of the H4010 feature which remains within woodland plantation inclosures. The actual area of the feature is unknown</p>	<p>See the notes for this attribute in Table 1 above.</p> <p>New Forest heathland comprises extensive dry and wet heaths and associated valley mires, streams, ponds, temporary pools, dry and wet grasslands. Together with woodlands, these habitats are on an extensive scale and form a dynamic mosaic fluctuating naturally over time.</p> <p>More than 3000ha of former heathland (wet and dry) is estimated to be located within the woodland plantation inclosures, Those planted with conifer will readily restore to heathland.</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>Sanderson N.A. 2007.</p>
Extent and distribution of the feature	Spatial distribution of the feature within the site	<p>Maintain the distribution and configuration of the H4010 feature, including where applicable its component vegetation types, across the site</p>	<p>A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes.</p> <p>This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat. Smaller fragments of habitat can typically support smaller and more isolated populations which are more vulnerable to extinction.</p> <p>These fragments also have a greater amount of open edge habitat which will differ in the amount of light, temperature, wind, and even noise that it receives compared to its interior. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.</p> <p>The creation or upgrading of tracks to facilitate visitor access across wet heathland may lead to the process of fragmentation, which in turn can have a number of effects, i.e. subdivision of habitat into smaller patches, isolation of habitat patches, increased edge effects.</p> <p>New access routes will in most cases cause direct habitat loss and damage</p>	<p>Sharp et al, 2008</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			through impaired function of ecosystem processes, drainage, compaction, trampling etc.	
Structure and function (including its typical species)	Vegetation community transitions	Maintain areas of transition between the H4010 feature and communities which form other heathland-associated habitats, including dry heath, various woodland types, <i>Molinia</i> grasslands, fen and acid grassland.	<p>Transitions/zonations between adjacent but different vegetation communities are usually related to naturally-occurring changes in soil, aspect or slope. Such 'ecotones' retain characteristics of each bordering community and can add value in often containing species not found in the adjacent communities. Retaining such transitions can provide further diversity to the habitat feature, and support additional flora and fauna. This is an important attribute as many characteristic heathland species utilise the transitions between vegetation types or use different vegetation types during different stages of their life cycle.</p> <p>Within the New Forest, wet heath forms a complex mosaic with other heathland, grassland, freshwater and woodland habitats. The transitions to dry heath and wetter mire habitat are particularly well-developed and remain relatively unmodified, The New Forest is unique in supporting a very wide band of intermediate vegetation (commonly called humid heath) which occupies the zone between the dry heath communities and wet heath.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Vegetation community composition	<p>Ensure the component vegetation communities of the H4010 feature are broadly referable to and characterised by the following National Vegetation Classification type:</p> <p>M16a <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath (typical community)</p> <p>M16b <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath (<i>Succisa pratensis</i> – <i>Carex panicea</i> sub-community.</p>	<p>This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC).</p> <p>Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. This will also help to conserve their typical plant species (i.e. the constant and preferential species of a community), and therefore that of the SAC feature, at appropriate levels (recognising natural fluctuations).</p> <p>The vegetation composition of the New Forest wet heaths is very diverse largely due to the long history of grazing by commoners' livestock and traditional management practices. Grazing pressure is not uniform and this provides a range of niches for organisms adapted to the extensive grazing</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>regime.</p> <p>Continuation of traditional grazing and management including rotational burning is fundamental to maintaining the characteristic vegetation composition of the New Forest wet heath.</p>	
Structure and function (including its typical species)	Cover of dwarf shrubs	For H4010 wet heath maintain an overall cover of dwarf shrub species at between 25-90%	<p>Variations in the structure of the heathland vegetation (vegetation height, amount of canopy closure, and patch structure) is needed to maintain high niche diversity and hence high species richness of characteristic heathland plants and animals. Many species also utilise the transitions between vegetation types or use different vegetation types during different stages of their life cycle. The structural character of the heathland feature is strongly influenced by the growing habits of its dominant species which in most cases will be ericoids (i.e. plants that look like heathers, including members of the Ericaceae and Empetraceae families).</p> <p>The main dwarf shrub species are heather <i>Calluna vulgaris</i>, and cross-leaved heath <i>Erica tetralix</i> but is too wet to support bell heather <i>Erica cinera</i>. Care will be needed to consider whether a failure to meet the target is due to inappropriate management or whether the habitat has a naturally low cover of ericoid shrubs.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Heather age structure	Maintain a diverse age structure amongst the ericaceous shrubs typically found on the site.	<p>Each phase of growth associated with the characteristic heathers which dominate this feature also represents different microclimatic conditions and microhabitats which may provide shelter or food to other organisms. Therefore, it is important to maintain a mosaic of heather in different phases of growth. Typically this age structure will consist of between 10-40% cover of (pseudo) pioneer heathers; 20-80% cover of building/mature heathers; <30% cover of degenerate heathers and less than <10% cover of dead heathers</p> <p>No one growth form should be dominant, but it is accepted that on a site on</p>	New Forest LIFE Partnership, 2001.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>the scale of the New Forest the mosaic of growth phases should be considered at a landscape scale to maximise available niches. What is important is that there is structural diversity in the heath communities across the SAC as a whole.</p> <p>To maintain a diverse age structure, grazing with commoners stock provides a differential grazing pressure across the heathland landscape supplemented where necessary with controlled burning, cutting and harvesting.</p>	
Structure and function (including its typical species)	Tree cover	<p>Restore the open character of the H4010 feature, with a typically scattered and low cover of trees and scrub <10% cover; including <i>Alnus glutinosa</i>, <i>Betula spp.</i>, <i>Ilex</i>, <i>Pinus spp</i>, <i>Prunus spinose</i>, <i>Quercus spp</i>, <i>Rubus fruticosus</i>, <i>Sarothamnus scoparius</i> and <i>Salix spp</i>, (excluding <i>S. repens</i>.</p> <p>Extent of <i>Myrica gale</i> should not be included within this target; this species should not exceed 30% cover.</p>	<p>Scrub (mainly trees or tree saplings above 1 m in height) and isolated trees are usually very important in providing warmth, shelter, cover, foodplants, perches, territorial markers and sources of prey for typical heathland invertebrates and vertebrates. But overall cover of scrub and trees across this habitat feature should be maintained or restored to a fairly sparse level, with a structurally complex edge and with characteristic heathland vegetation as ground cover. If scrub is locally important for any associated species with their own specific conservation objectives, then a higher level of cover will be acceptable. The area of scrub/tree cover should be stable or not increasing as a whole</p> <p>The retention of small clumps of trees to provide cover for grazing animals is a traditional feature of the New Forest and some single trees form important landscape features. Open heath should also have occasional scattered trees to provide song posts and nesting sites for characteristic birds such as tree pipit <i>Anthus trivialis</i>.</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>
Structure and function (including its typical species)	Key structural, influential and/or distinctive species	<p>Maintain the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature</p> <p>Structural The constant and preferential plants of the NVC community type which forms a key component of a SAC habitat that is present</p> <ul style="list-style-type: none"> M16a <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet 	<p>Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include;</p> <ul style="list-style-type: none"> Structural species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). Influential species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat) 	<p>New Forest LIFE Partnership, 2001.</p> <p>Natural England. (Various) Definitions of Favourable Condition for designated features of interest for the New Forest SSSI. Available from Natural England.</p>

Attributes	Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
	<p>heath (typical community)</p> <ul style="list-style-type: none"> M16b <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath (<i>Succisa pratensis</i> – <i>Carex panicea</i> sub-community). <p>Influential Grazing herbivores</p> <p>Site Distinctive</p> <ul style="list-style-type: none"> Heathland reptile assemblage including Smooth Snake <i>Coronela austriaca</i>, Sand Lizard <i>Lacerta angilis</i>, Adder <i>Vipera berus</i>, Grass snake <i>Natrix natrix</i>, Common Lizard <i>Lacerta vivipara</i>, Slow-worm <i>Anguis fragilis</i> Heathland vascular plant assemblage including Marsh gentian <i>Gentiana pneumonanthe</i>, Yellow Centaury <i>Cicendia filiformis</i>, Brown beaked sedge <i>Rhynchospora fusca</i>, Marsh clubmoss <i>Lycopodiella inundata</i>, pillwort <i>Pilularia globulifera</i> Heathland invertebrate assemblage including, Silver-studded blue <i>Plebejus argus</i> Southern damselfly <i>Coenagrion mercurale</i> Breeding bird assemblage 	<p>The vegetation composition of the New Forest wet heaths is very diverse largely due to the long history of grazing by commoners livestock. Grazing pressure is not uniform and this provides a range of niches for organisms adapted to the extensive grazing regime.</p> <p>Continuation of traditional grazing based on the existence of Rights of Common is fundamental to maintaining the characteristic vegetation composition of the New Forest wet heath.</p> <ul style="list-style-type: none"> Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. <p>There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary.</p> <p>The list of species given here for this Annex I habitat feature at this SAC is not necessarily exhaustive. The list may evolve, and species may be added or deleted, as new information about this site becomes available.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		including lapwing <i>Vanellus vanellus</i> , curlew <i>Numenius arquata</i> and snipe <i>Gallinago gallinago</i>		
Structure and function (including its typical species)	Undesirable species	<p>Restore the frequency/cover of the following undesirable species to within acceptable levels and prevent changes in surface condition, soils, nutrient levels or hydrology which may encourage their spread;</p> <p><i>Betula spp.</i>, <i>Pinus spp.</i>, <i>Cirsium arvense</i>, <i>Digitalis purpurea</i>, <i>Epilobium spp. (exc. E palustre)</i>, <i>Ranunculus repens</i>, <i>Senecio jacobaea</i>, <i>Rumex obtusifolius</i>, <i>Urtica dioica</i>. <i>Rhododendron ponticum</i></p>	<p>Undesirable non-woody and woody vascular plants species may require active management to avert an unwanted succession to a different and less desirable state. Often they may be indicative of a negative trend relating to another aspect of a site's structure and function. These species will vary depending on the nature of the particular feature, and in some cases these species may be natural/acceptable components or even dominants.</p> <p>The main threats are:</p> <p><i>Rhododendron ponticum</i> is a highly invasive shrub introduced from Asia. It casts dense shade excluding heathland vegetation and is of little interest for wildlife. It is abundant in private grounds throughout the New Forest providing a constant seed source.</p> <p>Scots pine <i>Pinus sylvestris</i> was introduced in the 18th century becomes quickly dominant on heathland habitat creating dense woodland conditions. The retention of small clumps of trees to provide cover for grazing animals is a traditional feature of the New Forest and some single trees form important landscape features.</p> <p>Two native species of birch, <i>Betula pendula</i> and <i>Betula pubescens</i> can be invasive and are associated with succession towards woodland.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Functional connectivity with wider landscape	Restore the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site	<p>This recognises the potential need at this site to maintain or restore the connectivity of the site to its wider landscape in order to meet the conservation objectives. These connections may take the form of landscape features, such as habitat patches, hedges, watercourses and verges, outside of the designated site boundary which are either important for the migration, dispersal and genetic exchange of those typical species closely associated with qualifying Annex I habitat features of the site.</p> <p>These features may also be important to the operation of the supporting ecological processes on which the designated site and its features may rely.</p> <p>The site includes 14 additional parcels of land which were originally unenclosed and likely to have had Rights of Common and management similar to the New Forest. The majority were grazed by New Forest stock up</p>	New Forest LIFE Partnership, 2001.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>until the perambulation was fenced in 1963.</p> <p>Both the core site and these sites would benefit from greater connectivity either by way of habitat connections or by incorporation into the forests management regime.</p> <p>Stream and river catchments extend beyond the boundary of the site and water quality and availability can be impacted by changes anywhere within the catchment.</p> <p>Changes to land use outside of the site can affect the supporting hydrological regime within the site and have significant implications for the assemblage of characteristic plants and animals present.</p>	
Structure and function (including its typical species)	Adaptation and resilience	Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site	<p>This recognises the increasing likelihood of natural habitat features to absorb or adapt to wider environmental changes. Resilience may be described as the ability of an ecological system to cope with, and adapt to environmental stress and change whilst retaining the same basic structure and ways of functioning.</p> <p>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.</p> <p>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>The overall vulnerability of this particular SAC to climate change has been assessed by Natural England as being <i>moderate</i>, taking into account the sensitivity, fragmentation, topography and management of its habitats. This means the site is considered to be vulnerable overall but a medium 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.</p> <p>Restoration of a natural hydrological regime provides the best defence against climate change, maximising the ability of these ecosystems to adapt</p>	<p>Natural England 2015 Climate Change Theme Plan and National Biodiversity Climate Change Vulnerability Assessments (NBCCVAs)</p> <p>Mainstone C, Hall R & Diack I., 2016</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			to changing conditions.	
Supporting processes (on which the feature relies)	Conservation measures	Restore the management measures (either within and/or outside the site boundary as appropriate) which are necessary to restore the structure, functions and supporting processes associated with the feature	<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>Grazing is of fundamental importance to the management of the New Forest in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest. Together with annual burning and cutting programmes ensuring that the wet heath has an extensive structural diversity supporting a range flora and fauna.</p>	<p>Natural England, 2014</p> <p>New Forest LIFE Partnership, 2001.</p>
Supporting processes (on which the feature relies)	Soils, substrate and nutrient cycling	<p>Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the H4010 habitat.</p> <p>Restore the properties of the underlying soil types where conifer plantation is being felled and restored to H4010 habitat</p>	<p>Soil is the foundation of basic ecosystem function and a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms. Soil biodiversity has a vital role to recycle organic matter.</p> <p>Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature. This Annex 1 habitat has essentially raw soils with little humus and low nutrient status. Apart from a few of the strata, the series of geological deposits produce base poor, acidic soils.</p> <p>Trampling from human activities can cause soil compaction, changes to soil hydrology and with heavy use, erosion and compacted bare ground. This leads to reductions in soil invertebrates and changes in plant communities. The effects are most acute near to car parks, access points from the urban fringe and in and around campsites.</p>	Sharp et al, 2008
Supporting processes (on which the feature relies)	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the	See notes for this attribute in Table 1 above.	More information about site-relevant Critical Loads and

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
feature relies)		site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).		Levels for this SAC is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk). Natural England 2014,
Supporting processes (on which the feature relies)	Hydrology	At a site, unit and/or catchment level as necessary, restore the natural hydrological regime to provide the conditions necessary to sustain the H4010 feature within the site	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature.</p> <p>Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts.</p> <p>From the mid-19th Century until the 1980's, many New Forest rivers and streams were widened, deepened and straightened to drain adjacent wetlands with the aim of providing better conditions for growing timber and grazing. Drainage channels were cut into mires and wet heath modifying the natural hydrology and hydrochemistry which affects both the character and extent of the natural mosaic of wet heath, mire, runnels and pools.</p> <p>Restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p>	Thomas, J.S., Diack, I. and Mainstone, C. 2016
Supporting processes (on which the feature relies)	Water quality / quantity	Where the feature is dependent on surface water and/or groundwater, restore water quality and quantity to a standard which provides the necessary conditions to support the feature	<p>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.</p> <p>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</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			but in some cases more stringent standards may be needed. Further site-specific investigations may be required to establish appropriate water quality standards for the SAC.	
Version Control				
Advice last updated: 18 March 2019 following stakeholder feedback – Target for Extent of feature within the site attribute amended to include areas of H4010 within woodland plantation; additional attribute Water quality / quantity added after initial omission from draft version.				
Variations from national feature-framework of integrity-guidance: n/a				

Table 3: Supplementary Advice for Qualifying Features: H4030. European dry heaths

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	<p>Maintain the total current extent of the H4030 feature at c7600 hectares.</p> <p>Restore the total extent of the H4030 feature which remains within woodland plantation inclosures. The actual area of the feature is unknown</p>	<p>See the notes for this attribute in Table 1 above.</p> <p>New Forest heathland comprises extensive dry and wet heaths and associated valley mires, streams, ponds, temporary pools, dry and wet grasslands. Together with woodlands, these habitats are on an extensive scale and form a dynamic mosaic fluctuating naturally over time.</p> <p>More than 3000ha of former heathland (wet and dry) is estimated to be located within the woodland plantation inclosures, Those planted with conifer will readily restore to heathland.</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>Sanderson N.A., 2007</p>
Extent and distribution of the feature	Spatial distribution of the feature within the site	<p>Maintain the distribution and configuration of the H4030 European Dry Heath feature, including where applicable its component vegetation types, across the site</p>	<p>A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes.</p> <p>This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat. Smaller fragments of habitat can typically support smaller and more isolated populations which are more vulnerable to extinction. These fragments also have a greater amount of open edge habitat which will differ in the amount of light, temperature, wind, and even noise that it receives compared to its interior. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.</p> <p>The creation or upgrading of tracks to facilitate visitor access across dry heathland may lead to the process of fragmentation, which in turn can have a number of effects, i.e. subdivision of habitat into smaller patches, isolation of habitat patches, increased edge effects.</p> <p>New access routes will in most cases cause direct habitat loss and damage through impaired function of ecosystem processes, drainage, compaction, trampling etc.</p>	<p>Sharp et al, 2008</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Vegetation community composition	<p>Ensure the component vegetation communities of the feature are referable to and characterised by the following National Vegetation Classification types:</p> <p>H2 Heather <i>Calluna vulgaris</i> - Dwarf Gorse <i>Ulex minor</i> heath</p> <p>H3 Dwarf Gorse <i>Ulex minor</i> – Bristle Bent <i>Agrostis curtisii</i> heath</p>	<p>This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC). Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. This will also help to conserve their typical plant species (i.e. the constant and preferential species of a community), and therefore that of the SAC feature, at appropriate levels (recognising natural fluctuations).</p> <p>The vegetation composition of the New Forest dry heath is very diverse largely due to the long history of grazing by commoners' livestock and traditional management practices. Grazing pressure is not uniform and this provides a range of niches for organisms adapted to the extensive grazing regime.</p> <p>Lichens are a significant component of the dry heathland habitat and there are a number of lichen rich hard-grazed heaths with prostrate heather which are a unique feature of the New Forest. These provide ideal conditions for a diverse range of lichen species and are often associated with larger cattle herds.</p> <p>Continuation of traditional grazing and management including rotational burning on the more humid heath is fundamental to maintaining the characteristic vegetation composition of the New Forest wet heath.</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p> <p>Sanderson N.A., 2015</p>
Structure and function (including its typical species)	Vegetation community transitions	<p>Maintain areas of transition between this feature and communities which form other heathland-associated habitats, including wet heath, various woodland types, <i>Molinia</i> grasslands, fen and acid grasslands, ponds and streams</p>	<p>Transitions/zonations between adjacent but different vegetation communities are usually related to naturally-occurring changes in soil, aspect or slope. Such 'ecotones' retain characteristics of each bordering community and can add value in often containing species not found in the adjacent communities.</p> <p>Retaining such transitions can provide further diversity to the habitat feature, and support additional flora and fauna. This is an important attribute as many characteristic heathland species utilise the transitions between vegetation types or use different vegetation types during different stages of their life cycle.</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Within the New Forest, dry heath forms a complex mosaic with other heathland, grassland, freshwater and woodland habitats. The transitions from dry heath through wet heath to mire habitat are particularly well-developed and remain relatively unmodified. The New Forest is unique in supporting a very wide band of intermediate vegetation (commonly called humid heath) which occupies the zone between the dry heath communities and wet heath.</p>	
Structure and function (including its typical species)	Vegetation structure: cover of dwarf shrubs	For H4030 dry heath maintain an overall cover of dwarf shrub species at between 25-90%	<p>Variations in the structure of the heathland vegetation (vegetation height, amount of canopy closure, and patch structure) is needed to maintain high niche diversity and hence high species richness of characteristic heathland plants and animals. Many species also utilise the transitions between vegetation types or use different vegetation types during different stages of their life cycle. The structural character of the heathland feature is strongly influenced by the growing habits of its dominant species which in most cases will be ericoids (i.e. plants that look like heathers, including members of the <i>Ericaceae</i> and <i>Empetraceae</i> families).</p> <p>Dwarf shrub species are heather <i>Calluna vulgaris</i>, bell heather <i>Erica cinera</i>, cross-leaved heath <i>Erica tetralix</i>, dwarf gorse <i>Ulex minor</i> and bilberry <i>Vaccinium myrtillus</i></p> <p>Care will be needed to consider whether a failure to meet the target is due to inappropriate management or whether the habitat has a naturally low cover of ericoid shrubs.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Bracken cover	<p>Maintain a low cover of dense bracken, typically at <5%</p> <p>Up to 90% cover with little bracken litter is acceptable in identified species-rich bracken stands</p>	<p>The spread of bracken <i>Pteridium aquilinum</i> is a problem on many lowland heathlands. The unpalatable nature and density of bracken as a tall-herb fern, and its decomposing litter, can smother and shade out smaller and more characteristic heathland vegetation. Usually active management of bracken is required to reduce or contain its cover across this habitat feature.</p> <p>However bracken is an important component of the heathland ecosystem providing cover for invertebrates and reptiles and in reducing grazing pressure and climatic exposure for grazing-sensitive plants. Some bracken stands are of the of high conservation importance as they support a high plant diversity similar to the upland NVC community <i>Pteridium aquilinum</i> – <i>Galium saxatile</i> species rich bracken islands; these areas are habitat for wild gladioli <i>Gladiolus illyricus</i>.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments Cox, J., 2013.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Cover of gorse	Maintain a total cover of gorse at <25% of the H4030 feature	<p>Gorse as a component of heathland is a very valuable wildlife habitat, and often a marker of relict heath and common. Both dense and spiny, it provides good, protected cover for many wildlife species: birds, mammals and reptiles; breeding habitat for rare or declining bird species including Dartford Warbler <i>Sylvia undata</i>, and excellent winter roosting. The flowers, borne at a time of year when other sources of pollen or nectar are in short supply, are particularly good for insects and other invertebrate pollinators. However gorse may cause problems if unchecked by dominating an area, eliminating other typical heathland species. Mature stands en masse may also be serious fire hazards.</p> <p>Judgement will be needed when assessing this objective as levels of gorse cover will vary widely across the SAC at any one time; the key issue is that levels of gorse cover should be appropriate to ensure maintenance of habitat quality. There should be no indication of declining condition of the associated habitat due to increasing dominance of gorse.</p> <p>This target does not apply to the more extensive continuous blocks of gorse which should be assessed separately for their suitability for Dartford warbler.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Tree cover	<p>Restore the open character of the feature, with a typically scattered and low cover of trees and scrub -<10% cover including <i>Alnus glutinosa</i>, <i>Betula spp.</i>, <i>Ilex</i>, <i>Pinus spp</i>, <i>Prunus spinose</i>, <i>Quercus spp</i>, <i>Rubus fruticosus</i>, <i>Sarothamnus scoparius</i> and <i>Salix spp</i>, (excluding <i>S. repens</i>.</p> <p>Extent of <i>Myrica gale</i> should not be included within this target; this species should not exceed 30% cover.</p>	<p>Scrub (mainly trees or tree saplings above 1 m in height) and isolated trees are usually very important in providing warmth, shelter, cover, foodplants, perches, territorial markers and sources of prey for typical heathland invertebrates and vertebrates. But overall cover of scrub and trees across this habitat feature should be maintained or restored to a fairly sparse level, with a structurally complex edge and with characteristic heathland vegetation as ground cover. If scrub is locally important for any associated species with their own specific conservation objectives, then a higher level of cover will be acceptable. The area of scrub/tree cover should be stable or not increasing as a whole</p> <p>The retention of small clumps of trees to provide cover for grazing animals is a traditional feature of the New Forest and some single trees form important landscape features. Open heath should also have occasional scattered trees to provide song posts and nesting sites for characteristic birds such as tree pipit.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Heather age structure	Maintain a diverse age structure amongst the ericaceous shrubs typically found on the site	Each phase of growth associated with the characteristic heathers which dominate this feature also represents different microclimatic conditions and microhabitats which may provide shelter or food to other organisms. Therefore, it is important to maintain a mosaic of heather in different phases	This attribute will be periodically monitored as part of Natural England's

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
species)			<p>of growth. Typically this age structure will consist of between 10-40% cover of (pseudo) pioneer heathers; 20-80% cover of building/mature heathers; <30% cover of degenerate heathers and less than <10% cover of dead heathers.</p> <p>No one growth form should be dominant, but it is accepted that on a site on the scale of the New Forest it is not essential for all growth stages to be represented in any one area. What is important is that there is structural diversity in the heath communities across the SAC as a whole.</p> <p>To maintain a diverse age structure, grazing with commoners stock provides a differential grazing pressure across the heathland landscape supplemented where necessary with controlled burning, cutting and harvesting.</p>	SSSI Condition Assessments
Structure and function (including its typical species)	Undesirable species	<p>Restore the frequency/cover of the following undesirable species to within acceptable levels and prevent changes in surface condition, soils, nutrient levels or hydrology which may encourage their spread including <i>Betula</i> spp., <i>Pinus</i> spp <i>Cirsium arvense</i>, <i>Digitalis purpurea</i>, <i>Epilobium</i> spp. (exc <i>E palustre</i>), <i>Ranunculans repens</i>, <i>Senecio jacobaea</i>, <i>Rumex obtusifolius</i>, <i>Urtica dioica</i> <i>Rhododendron ponticum</i>.</p>	<p>Undesirable non-woody and woody vascular plants species may require active management to avert an unwanted succession to a different and less desirable state. Often they may be indicative of a negative trend relating to another aspect of a site's structure and function. These species will vary depending on the nature of the particular feature, and in some cases these species may be natural/acceptable components or even dominants.</p> <p>The main threats are:</p> <p><i>Rhododendron ponticum</i> is a highly invasive shrub introduced from Asia. It casts dense shade excluding heathland vegetation and is of little interest for wildlife. It is abundant in private grounds throughout the New Forest providing a constant seed source.</p> <p>Scots pine <i>Pinus sylvestris</i> was introduced in the 18th century becomes quickly dominant on heathland habitat creating dense woodland conditions. The retention of small clumps of trees to provide cover for grazing animals is a traditional feature of the New Forest and some single trees form important landscape features.</p> <p>Two native species of birch, <i>Betula pendula</i> and <i>Betula pubescens</i> can be invasive and are associated with succession towards woodland.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
<p>Structure and function (including its typical species)</p>	<p>Key structural, influential and/or distinctive species</p>	<p>Maintain the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature</p> <p>Structural</p> <p>The constant and preferential plants of H2 Heather <i>Calluna vulgaris</i> - Dwarf Gorse <i>Ulex minor</i> heath and H3 Dwarf Gorse <i>Ulex minor</i> – Bristle Bent <i>Agrostis curtisii</i> heath vegetation types</p> <p>Influential</p> <p>Grazing herbivores</p> <p>Site Distinctive</p> <p>Heathland reptile assemblage including Smooth Snake <i>Coronella austriaca</i>, Sand Lizard <i>Lacerta angilis</i>, Adder <i>Vipera berus</i>, Grass snake <i>Natrix natrix</i>, Common Lizard <i>Lacerta vivipara</i>, Slow-worm <i>Anguis fragilis</i></p> <p>Heathland vascular plant assemblage including Wild Gladioli <i>Gladiolus illyricus</i>, Yellow Centaury <i>Cicendia filiformis</i>, Mossy Stonecrop <i>Crassula tillaea</i>, Coral necklace <i>Illecebrum verticillatum</i>, Pale heath violet <i>Viola lacteal</i></p> <p>Heathland lichen and bryophyte assemblage including <i>Cladonia strepsilis</i>, <i>Pycnothelia</i>, <i>papillaria</i> <i>Hypnum imponens</i> and <i>Dicranum</i></p>	<p>Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include;</p> <ul style="list-style-type: none"> • Structural species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). • Influential species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat). <p>The vegetation composition of the New Forest dry heath is very diverse largely due to the long history of grazing by commoners livestock. Grazing pressure is not uniform and this provides a range of niches for organisms adapted to the extensive grazing regime.</p> <p>Continuation of traditional grazing based on the existence of Rights of Common is fundamental to maintaining the characteristic vegetation composition of the New Forest dry heath.</p> <ul style="list-style-type: none"> • Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. <p>There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary.</p> <p>The list of species given here for this Annex I habitat feature at this SAC is not necessarily exhaustive. The list may evolve, and species may be added or deleted, as new information about this site becomes available.</p>	<p>Definitions of Favourable Condition for designated features of interest for the New Forest SSSI</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p><i>spurium</i></p> <p>Heathland invertebrates including Long-spined ant <i>Temnothorax interruptus</i>, Silver-studded blue <i>Plebejus argus</i>, New Forest shieldbug <i>Eysarcoris aeneus</i></p>		
Structure and function (including its typical species)	Functional connectivity with wider landscape	Restore the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site	See the notes for this attribute in Table 2 above.	New Forest LIFE Partnership, 2001.
Structure and function (including its typical species)	Adaptation and resilience	Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site	See the notes for this attribute in Table 1 above.	Natural England 2015
Structure and function (including its typical species)	Soils, substrate and nutrient cycling	<p>Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the H4030 habitat.</p> <p>Restore the properties of the underlying soil types where conifer plantation is being felled and restored to H4030 habitat</p>	<p>Soil is the foundation of basic ecosystem function and a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms. Soil biodiversity has a vital role to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.</p> <p>This Annex 1 habitat has essentially raw soils with little humus and low nutrient status. Apart from a few of the strata, the series of geological deposits produce base poor, acidic soils.</p> <p>Trampling from human activities can cause soil compaction, changes to soil hydrology and with heavy use, erosion and compacted bare ground. This leads to reductions in soil invertebrates and changes in plant communities. The effects are most acute near to car parks, access points from the urban fringe and in and around campsites.</p>	Sharp et al, 2008
Supporting processes (on which the feature relies)	Conservation measures	Restore the management measures (either within and/or outside the site boundary as appropriate) which are necessary	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,	New Forest LIFE Partnership, 2001. Natural England,

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		to restore the structure, functions and supporting processes associated with the feature	<p>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>Grazing is of fundamental importance to the management of the New Forest in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest. Together with annual burning and cutting programmes ensuring that the wet heath has an extensive structural diversity supporting a range flora and fauna.</p>	2014
Supporting processes (on which the feature relies)	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	See the notes for this attribute in Table 1 above.	<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 (www.apis.ac.uk).</p> <p>Natural England, 2014</p>
Supporting processes (on which the feature relies)	Water quality / quantity	Where the feature is dependent on surface water and/or groundwater, restore water quality and quantity to a standard which provides the necessary conditions to support the feature	<p>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.</p> <p>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. Further site-specific investigations may be required to establish appropriate water quality standards for the SAC</p>	
<p>Version Control Advice last updated: 18 March 2019 following stakeholder feedback – Target for Extent of feature within the site attribute amended to include areas of H4030 within woodland plantation; additional attribute Water quality / quantity added after initial omission from draft version.</p> <p>Variations from national feature-framework of integrity guidance: N/A</p>				

Table 4: Supplementary Advice for Qualifying Features: H6410. *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae); Purple moor-grass meadows

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	Restore the total extent of the H6410 feature to c1263 hectares.	<p>See the notes for this attribute in Table 1 above.</p> <p>The New Forest wet grassland (locally known as ‘wet lawns’) are a distinctive feature and form part of a mosaic together with extensive dry and wet heaths and associated valley mires, streams, ponds, temporary pools, dry grasslands and woodlands. These habitats are on an extensive scale and form a dynamic mosaic fluctuating naturally over time.</p> <p>Approximately 200ha of former wet grassland is estimated to be located within the plantation inclosures and many have been drained and planted with trees, but still have restoration potential.</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>Sanderson N.A., 2007</p>
Extent and distribution of the feature	Spatial distribution of the feature within the site	Maintain the distribution and configuration of the H6410 feature, including where applicable its component vegetation types, across the site	<p>A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes. This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat. Smaller fragments of habitat can typically support smaller and more isolated populations which are more vulnerable to extinction. These fragments also have a greater amount of open edge habitat which will differ in the amount of light, temperature, wind, and even noise that it receives compared to its interior. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.</p> <p>This feature is confined to seasonally wet soils and widely distributed across the site. It can be found on flushed soils on slopes and on the flood plains of streams and rivers.</p> <p>The creation or upgrading of tracks to facilitate visitor access across wet grassland may lead to the process of fragmentation, which in turn can</p>	<p>Sanderson, N.A., 1998</p> <p>Sharp et al, 2008.</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			have a number of effects, i.e. subdivision of habitat into smaller patches, isolation of habitat patches, increased edge effects and drainage	
Structure and function (including its typical species)	Vegetation community composition	<p>Ensure the component vegetation communities of the H6410 feature are referable to and characterised by the following National Vegetation Classification types:</p> <p>M24c <i>Molinia caerulea</i> – <i>Cirsium dissectum</i> Fen Meadow – <i>Juncus acutiflorus</i> – <i>Erica tetralix</i> sub community</p> <p>M25b <i>Molinia caerulea</i> – <i>Potentilla erecta</i> mire – <i>Anthoxanthum odoratum</i> sub community</p>	<p>This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC).</p> <p>Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. This will also help to conserve their typical plant species (i.e. the constant and preferential species of a community), and therefore that of the SAC feature, at appropriate levels (recognising natural fluctuations).</p> <p>The wet grasslands of the New Forest (locally known as wet lawns) are a complex mosaic of plant communities and not well defined in the NVC. They are preferentially grazed with very tight swards which maintains an abundance and diversity of plant species.</p>	Sanderson, N.A., 1998
Structure and function (including its typical species)	Key structural, influential and/or distinctive species	<p>Restore the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature :</p> <p>Structural Constant and preferential plant species of the M24c <i>Molinia caerulea</i> – <i>Cirsium dissectum</i> Fen Meadow – <i>Juncus acutiflorus</i> – <i>Erica tetralix</i> sub community and M25b <i>Molinia caerulea</i> – <i>Potentilla erecta</i> mire – <i>Anthoxanthum odoratum</i> sub community</p> <p>Influential Grazing herbivores</p>	<p>Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include;</p> <ul style="list-style-type: none"> • Structural species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). • Influential species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat) <p>The vegetation composition of the New Forest wet grasslands is very diverse largely due to the long history of grazing by commoners livestock. The wet grasslands are productive and therefore preferentially grazed by livestock and support a suite of species adapted to the long history of grazing pressure together with specialists of bare poached ground which are now rare beyond the New Forest.</p>	New Forest LIFE Partnership, 2001

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p>Site-Distinctive Wet grassland vascular plant assemblage, including slender marsh bedstraw <i>Galium constrictum</i>, star sedge <i>Carex echinata</i>, creeping willow, <i>Salix repens</i>, chamomile <i>Chamaemelum nobile</i>, Pennyroyal <i>Mentha pulegium</i>, Lesser water-plantain <i>Baldellia ranunculoides</i></p> <p>Wet grassland invertebrates, including Beaulieu dung beetle <i>Aphodius niger</i></p>	<p>Continuation of traditional grazing based on the existence of Rights of Common is fundamental to maintaining the characteristic vegetation composition of the New Forest H6410 wet grassland.</p> <p>Wet grassland habitats on private land adjacent to the core New Forest will have been much more lightly grazed in the past and have more structural diversity providing contrasting habitat for a different range of species.</p> <ul style="list-style-type: none"> • Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. <p>There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary. .</p>	
Structure and function (including its typical species)	Vegetation: undesirable species	<p>Restore the frequency/cover of the following undesirable species to within acceptable levels and prevent changes in surface condition, soils, nutrient levels or hydrology which may encourage their spread.</p>	<p>Undesirable non-woody and woody vascular plants species may require active management to avert an unwanted succession to a different and less desirable state. Often they may be indicative of a negative trend relating to another aspect of a site's structure and function.</p> <p>These species will vary depending on the nature of the particular feature, and in some cases these species may be natural/acceptable components or even dominants.</p> <p>Although scrub provides structural diversity, its expansion can reduce the extent of the habitat and threaten botanical richness. There is a need across the site for restoration of wet grassland from scrub and secondary woodland.</p> <p>Undesirable species may include: creeping thistle <i>Cirsium arvense</i>, common foxglove <i>Digitalis purpurea</i>, willowherbs <i>Epilobium</i> spp. (exc <i>E palustre</i>), creeping buttercup <i>Ranunculans repens</i>, ragwort <i>Senecio jacobaea</i>, broad-leaved dock <i>Rumex obtusifolius</i>, common nettle <i>Urtica dioica</i>, hawthorn <i>Crataegus monogyna</i>, blackthorn <i>Prunus spinosa</i>, crab apple <i>Malus sylvestris</i>, scots pine <i>Pinus sylvestris</i> and birch <i>Betula</i> spp.</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Vegetation community transitions	Maintain the pattern of natural vegetation zonations/transitions between the H6410 feature and wet and dry heath, various woodland types, fen and acid grassland.	<p>Transitions/zonations between adjacent but different vegetation communities are usually related to naturally-occurring changes in soil, aspect or slope. Such 'ecotones' retain characteristics of each bordering community and can add value in often containing species not found in the adjacent communities. Retaining such transitions can provide further diversity to the habitat feature, and support additional flora and fauna.</p> <p>Within the New Forest, wet grassland forms a complex mosaic with other heathland, grassland, freshwater and woodland habitats. The transitions to wetter and dryer habitats remain relatively unmodified.</p> <p>Ephemeral ponds are typically found within wet lawns and make a significant contribution to the ecological character of the grasslands and support nationally rare species such as slender marsh bedstraw <i>Galium constrictum</i>.</p>	
Structure and function (including its typical species)	Soils, substrate and nutrient cycling	<p>Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the habitat.</p> <p>For this feature, soil P index should typically be 0 (<9 mg l⁻¹)</p>	<p>Soil is the foundation of basic ecosystem function and a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms. Soil biodiversity has a vital role to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.</p> <p>This Annex 1 habitat is confined to clays and soils affected by high ground water levels occurring on valley slopes and flood plains where the soils are more enriched.</p> <p>Trampling from human activities can cause soil compaction, changes to soil hydrology and with heavy use, erosion and compacted bare ground. This leads to reductions in soil invertebrates and changes in plant communities. The effects are most acute near to car parks, access points from the urban fringe and in and around campsites.</p>	Sharp et al, 2008
Structure and function (including its typical species)	Water quality	Where the feature is dependent on surface water and/or groundwater, restore water quality and quantity to a standard	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	Thomas, J.S., Diack, I. and Mainstone, C., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
species)		which provides the necessary conditions to support the feature	<p>affect the structure and function of this habitat type.</p> <p>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. Further site-specific investigations may be required to establish appropriate water quality standards for the SAC.</p> <p>From the mid-19th Century until the 1980's, many New Forest rivers and streams were widened, deepened and straightened to drain adjacent wet grassland with the aim of providing better conditions for grazing. Drainage channels were also cut into the grasslands modifying the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p> <p>Restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p>	
Structure and function (including its typical species)	Hydrology: Water table	Restore a hydrological regime that provides a sub-surface water table during the summer (range - 2 to -48 cm below ground level) and a winter water table \pm at the surface. Inundation should be occasional in winter	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature.</p> <p>Changes in depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and as precise tolerances are not known, further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts.</p> <p>From the mid-19th Century until the 1980's, many New Forest rivers and streams were widened, deepened and straightened to drain adjacent wet grassland with the aim of providing better conditions for grazing. Floodplain grasslands adjacent to overdeepened channels are deprived of the natural irrigation and nutrient input from seasonal floodwaters. Drainage channels were also cut into the grasslands modifying the natural hydrology and hydrochemistry.</p> <p>Restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Supporting off-site habitat	Maintain the extent, quality and spatial configuration of land or habitat surrounding or adjacent to the site which is known to support the feature.	<p>The structure and function of the qualifying habitat, including its typical species, may rely upon the continued presence of areas which surround and are outside of the designated site boundary. Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species.</p> <p>This supporting habitat may be critical to the typical species of the feature to support their feeding, breeding, roosting, population dynamics ('metapopulations'), pollination or to prevent/reduce/absorb damaging impacts from adjacent land uses e.g. pesticide drift, nutrient enrichment.</p>	
Structure and function (including its typical species)	Maintaining integrity of hydrological catchment	Restore the full range of hydrological/hydrogeological aspects of a site's catchment that contribute to its functioning and the maintenance of the feature	<p>The movement, quality and distribution of water within a site's wider catchment and outside of the site's boundary will affect its ability to support this wetland habitat feature. Catchment size will vary. A site's water table and other hydrological aspects may be affected by changes in the use of the land surface, water abstraction, flood alleviation, development and mineral extraction in the wider catchment.</p> <p>From the mid-19th Century until the 1980's, many New Forest rivers and streams were widened, deepened and straightened to drain adjacent wet grassland with the aim of providing better conditions for grazing. Drainage channels were also cut into the grasslands modifying the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p> <p>Many of the streams and river catchments extend beyond the boundary of the site and modifications both within and outside of the boundary can have an impact on the quality and availability of water within the SAC.</p> <p>Artificial drainage, new infrastructure such as bridges and change of land use can all affect the hydrological regime and have significant implications for the assemblage of characteristic plants and animals present.</p>	Mainstone C, Hall R. & Diack I., 2016
Structure and function (including its typical species)	Functional connectivity with wider landscape	Maintain the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site	See the notes for this attribute in table 1 above.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Adaptation and resilience	Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site	See the notes for this attribute in table 1 above.	Natural England 2015 Mainstone C, Hall R & Diack I., 2016
Supporting processes (on which the feature relies)	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	See the notes for this attribute in table 1 above.	More information about site-relevant Critical Loads and Levels for this SAC is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk) Natural England 2014,
Supporting processes (on which the feature relies)	Conservation measures	Restore the management measures (either within and/or outside the site boundary as appropriate) which are necessary to restore the structure, functions and supporting processes associated with the feature	Active and ongoing conservation management is needed to protect, maintain or restore this feature at this site. Further details about the necessary conservation measures for this site can be provided by contacting Natural England. This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements. Conservation measures for this feature typically include grazing, cutting, scrub management, weed control, recreation/visitor management. Also covered is maintenance of surface drainage features such as drains, grips, gutters and foot drains. Retention of suitable land use infrastructure/patterns to enable site management e.g. pastoral livestock farming Grazing is of fundamental importance to the management of the New Forest in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest.	Natural England 2014, New Forest LIFE Partnership, 2001.
Version Control Advice last updated: 18 March 2019 following stakeholder feedback – Extent of feature within site – target extent increased				
Variations from national feature-framework of integrity-guidance: n/a				

Table 5: Supplementary Advice for Qualifying Features: H7140. Transition mires and quaking bogs; 'Very wet mires often identified by an unstable 'quaking' surface'

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	Restore the total extent of the H7140 feature to c9ha hectares.	<p>See the notes for this attribute in Table 1 above.</p> <p>New Forest mires form an integral part of the heathland complex which comprises extensive dry and wet heaths and associated valley mires, streams, ponds, temporary pools, dry and wet grasslands. Together with woodlands, these habitats are on an extensive scale and form a dynamic mosaic fluctuating naturally over time.</p> <p>In the past the New Forest resource of this habitat was significantly under-appreciated and was not, therefore, identified as a primary reason for the SAC designation. Recent work has shown that the valley mire systems of the New Forest support some of the finest transition mires in England and estimated that the SAC supports around 40% of the national resource.</p> <p>Large valley mire complexes are also located within the woodland inclosures. Many of these mires have been drained and planted with conifers but where they are partially intact, there is the potential for restoration. Restoration may lead to the development of M9 plant communities in situations where there is seepage of base-rich water, usually from Headon Beds.</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>Thomas, J.S., Diack, I. and Mainstone, C., 2016</p> <p>Sanderson N.A., 2007</p>
Extent and distribution of the feature	Spatial distribution of the feature within the site	Maintain the distribution and configuration of the H7140 feature, including where applicable its component vegetation types, across the site	<p>Distribution includes the spatial pattern or arrangement of this habitat feature, and its component vegetation types, across the site. Changes in distribution may affect the nature and range of the vegetation communities present, the operation of the physical, chemical, and biological processes in the system and the resiliency of the site and its features to changes or impacts.</p> <p>Within the New Forest found within valley mires in mildly base-enriched, very swampy areas in places such as Wilverley, Holmsley and Burley Common Moor in the south-west of the Forest s and in the east of the forest near Fort Bog.</p>	New Forest LIFE Partnership, 2001.
Structure and function (including its	Vegetation community composition	Ensure the component vegetation communities of the H7140 feature are referable to	This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-	Tratt, R., Parnell, M., Eades, P. & Shaw, S.C., 2014

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
typical species)		<p>and characterised by the following National Vegetation Classification type:</p> <p>M9 <i>Calliergon cuspidatum</i> – <i>Carex rostrate</i></p> <p>M14: <i>Schoenus nigricans</i>–<i>Nartheccium ossifragum mire</i></p> <p>M29: <i>Potamogeton polygonifolius</i>–<i>Hypericum elodes</i> soakway</p> <p>M21: <i>Erica tetralix</i>–<i>Sphagnum papillosum mire</i></p>	<p>status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC). Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature.</p> <p>This is a variable community, characterised by <i>Calliergon cuspidatum</i> and <i>Carex rostrate</i> with various brown and base tolerant mosses. <i>Sphagna</i>, apart from more base demanding species, are rare and in the New Forest communities <i>Schoenus</i> is absent.</p>	
Structure and function (including its typical species)	Key structural, influential or site distinctive species: flora and fauna	<p>Restore the abundance of the typical species listed below to enable each of them to be a viable component of the Annex 1 habitat;</p> <p>Structural The constant and preferential plants of M9, M14, M29 and M21 vegetation types</p> <p>Influential Grazing herbivores</p> <p>Distinctive Mire vascular plants: Bog sedge <i>Carex limosa</i>, Slender sedge <i>Carex lasiocarpa</i>, Slender cotton grass <i>Eriophorum gracile</i>, Great sundew <i>Drosera anglica</i>, Lesser bladderwort <i>Utricularia minor</i></p>	See the notes for this attribute above.	<p>Sanderson, N.A., 1998</p> <p>Falk, S., 2010</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p>Mire bryophytes: <i>Sphagnum contortum</i>, <i>sphagnum teres</i>, <i>Sphagnum subsecundum</i></p> <p>Mire Invertebrates: Six-spotted crane fly <i>Idiocera sexguttata</i></p>		
Structure and function (including its typical species)	Invasive, non-native and/or introduced species	Ensure invasive and introduced non-native species are either rare or absent, but if present are causing minimal damage to the feature	<p>Invasive or introduced non-native species can be a serious potential threat to the structure and function of these habitats, because they are able to exclude, damage or suppress the growth of their associated typical species, reduce structural diversity of the habitat and prevent the natural regeneration of characteristic site-native species. Once established, the measures to control such species may also impact negatively on the features of interest (e.g. use of broad spectrum pesticides).</p> <p>In 2009/ 2010 a study in the New Forest showed that <i>Crassula. helmsii</i>, was distributed in a distinct pattern associated with public access. It is likely that introduction of other non-native species will show a similar pattern and is likely to be through the accidental or deliberate release by people or where vehicles and/ or equipment have been used which are likely to have come from an infected site.</p>	Ewald, N.C., 2014
Structure and function (including its typical species)	Presence/ cover of woody species	<p>Restore a low cover (<10% of the area) of scrub or trees within stands of H7140 feature</p> <p>Extent of <i>Myrica gale</i> should not be included within this target; this species should not exceed 30% cover.</p>	<p>Native trees and shrubs occur naturally on bog and fen surfaces but an abundance of scrub and trees on bogs and fens is sometimes regarded as detrimental because they are indicators and perpetrators of drying out and may cause damage to vegetation structure through shading effects. Birch, pine, willow and rhododendron (an invasive non-native species) are the main species of concern. The seeds of most invasive woody species are wind dispersed, so trees are able to establish on raised bog and fen surfaces.</p> <p>The retention of clumps of trees to provide cover for grazing animals is a traditional feature of the New Forest however these should not be allowed to develop in or adjacent to mire habitats.</p> <p>H7140 mires are often associated with mire woodland, its spread, usually related to drainage or low grazing pressure, can threaten the extent of these mires.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Exposed substrate	Maintain a low cover of exposed substrate of between 5-10% across the H7140 feature.	For this wetland habitat type, maintaining some continuous extent of exposed, open ground surface is required to support the establishment and supply of those component species which often rely on wet and sparsely-vegetated conditions.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Hydrology	At a site, unit and/or catchment level (as necessary), restore natural hydrological processes to provide the conditions necessary to sustain the feature within the site	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present, particularly to habitats such as H7140 mires that are highly sensitive to change. Therefore maintaining or restoring natural hydrological function is critical to achieving the conservation objectives for this feature</p> <p>From the mid-19th Century until the 1980's, drainage channels were cut into many New Forest mires with the aim of providing better conditions for growing timber and grazing. This modified the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p> <p>Restoration of natural hydrological function in mires that have been drained or modified in other ways may lead to the development of H7140 features in situations where there is seepage of base-rich water, usually from Headon Beds.</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016
Structure and function (including its typical species)	Water chemistry	Restore the surface water and groundwater supporting the hydrology of the H7140 feature to a low nutrient status.	<p>UKTAG (2012) provides threshold values for nitrate concentration in groundwaters for different wetland types. The threshold values will mainly be used in the characterisation of GWDTE status for the WFD, primarily as a risk screening tool, to assess if sites are 'at risk' or 'not at risk' from groundwater mediated nutrient pressure. Due to the complex cycling of nutrients within many GWDTE, these threshold values are less well suited for application within sites but rather just to groundwater that is directly feeding the site.</p> <p>In the New Forest H7140 mires develop where low-nutrient, mildly base-rich water is at the surface or slightly above the surface for the whole year. It is very sensitive to changes in water regime and</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>chemistry/nutrient status. Maintenance or restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p> <p>From the mid-19th Century until the 1980's, drainage channels were cut into many New Forest mires with the aim of providing better conditions for grazing. This modified the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p>	
Structure and function (including its typical species)	Hydrology	Restore a high piezometric head and permanently high water table (allowing for natural seasonal fluctuations) on groundwater dependent sites.	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts. Some examples of H7140 may be wholly or partly groundwater dependent. Others have a greater dependence on surface water or rain water inputs. It is critically important to understand the ecohydrological context of all sites.</p> <p>In the New Forest H7140 mires develop where low-nutrient, mildly base-rich water is at the surface or slightly above the surface for the whole year. It is very sensitive to changes in water regime. Maintenance or restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p>	Mainstone C, Hall R & Diack I., 2016
Structure and function (including its typical species)	Adaptation and resilience	Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site	<p>This recognises the increasing likelihood of natural habitat features to absorb or adapt to wider environmental changes. Resilience may be described as the ability of an ecological system to cope with, and adapt to environmental stress and change whilst retaining the same basic structure and ways of functioning.</p> <p>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.</p>	Natural England, 2015 Mainstone C, Hall R & Diack I., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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>The overall vulnerability of this particular SAC to climate change has been assessed by Natural England as being moderate, taking into account the sensitivity, fragmentation, topography and management of its habitats. This means the site is considered to be vulnerable overall but a medium 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.</p> <p>A natural hydrological regime provides the best defence against climate change, maximising the ability of these ecosystems to adapt to changing conditions.</p>	
Structure and function (including its typical species)	Supporting off-site habitat	Maintain the extent, quality and spatial configuration of land or habitat surrounding or adjacent to the site which is known to support the feature	<p>The structure and function of the qualifying habitat, including its typical species, may rely upon the continued presence of areas which surround and are outside of the designated site boundary.</p> <p>Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species. This supporting habitat may be critical to the typical species of the feature to support their feeding, breeding, roosting, population dynamics ('metapopulations'), pollination or to prevent/reduce/absorb damaging impacts from adjacent land uses e.g. pesticide drift, nutrient enrichment.</p>	
Supporting processes (on which the feature relies)	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	See the notes for this attribute in Table 1 above.	<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 (www.apis.ac.uk).</p> <p>Natural England 2014</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting processes (on which the feature relies)	Conservation measures	Restore the management measures (either within and/or outside the site boundary as appropriate) which are necessary to restore the structure, functions and supporting processes associated with the H7140 feature	<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. This habitat in most cases requires ongoing cutting or grazing maintain its open character.</p> <p>In the New Forest H7140 mires develop where low-nutrient, mildly base-rich water is at the surface or slightly above the surface for the whole year. It is very sensitive to changes in water regime and chemistry/nutrient status. Maintenance or restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p> <p>Grazing is of fundamental importance to the management of the New Forest in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest.</p>	New Forest LIFE Partnership, 2001
Version Control				
Advice last updated: n/a				
Variations from national feature-framework of integrity-guidance: n/a				

Table 6: Supplementary Advice for Qualifying Features: H7150. Depressions on peat substrates of the *Rhynchosporion*

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	Restore the total extent of the H7150 feature at c210 hectares.	<p>See the notes for this attribute in Table 1 above.</p> <p>The <i>Rhynchosporion</i> is a vegetation alliance closely associated with bog pools and runnels on intact bogs (valley, raised and blanket bogs) and transition mire and quaking bog. JNCC guidance also includes within the definition vegetation on seepage areas on humid and wet heath. This Annex 1 feature is difficult to map due to both the small size of individual patches and the transitory nature of elements of the habitat (e.g. when on disturbed shallow peat/sand). As a result, the extent, or even presence, on protected sites is rarely known and detailed survey will be necessary on smaller sites.</p> <p>In the New Forest, The habitats associated with the <i>Rhynchosporion</i> form an integral part of the heathland complex and together with grassland, woodland, pond and stream habitats are on an extensive scale and form a dynamic mosaic fluctuating naturally over time.</p> <p>Large valley mire complexes and wet heathlands are also located within the woodland inclosures. Many of these habitats have been drained and planted with conifers but where they are partially intact, there is the potential for restoration. Restoration may lead to the development of The <i>Rhynchosporion</i> habitat where the reintroduction of grazing creates bare peat.</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>Sanderson N.A., 2007</p>
Extent and distribution of the feature	Spatial distribution of the feature within the site	Restore the distribution and configuration of the H7150 feature, including where applicable its component vegetation types, across the site	Distribution includes the spatial pattern or arrangement of this habitat feature, and its component vegetation types, across the site. Changes in distribution may affect the nature and range of the vegetation communities present, the operation of the physical, chemical, and biological processes in the system and the resiliency of the site and its features to changes or impacts.	New Forest LIFE Partnership, 2001.
Structure and function (including its typical species)	Vegetation community composition	<p>Ensure the component vegetation communities of the H7150 feature are referable to and characterised by the following National Vegetation Classification type</p> <ul style="list-style-type: none"> M16c: Cross-leaved Heath - <i>Sphagnum compactum</i> wet 	This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC). Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		heath -White Beak-sedge-Oblong-leaved Sundew sub-community (<i>Erica tetralix-Sphagnum compactum</i> wet heath - <i>Rhynchospora alba-Drosera intermedia</i> sub-community) <ul style="list-style-type: none"> • M21: <i>Erica tetralix-Sphagnum papillosum</i> mire • M1: <i>Sphagnum auriculatum</i> Bog pool community 		
Structure and function (including its typical species)	Key structural, influential and/or distinctive species	Restore the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature : <p>Structural Constant and preferential plant species of the</p> <ul style="list-style-type: none"> • M16c: Cross-leaved Heath - <i>Sphagnum compactum</i> wet heath -White Beak-sedge-Oblong-leaved Sundew sub-community (<i>Erica tetralix-Sphagnum compactum</i> wet heath - <i>Rhynchospora alba-Drosera intermedia</i> sub-community) • M21: <i>Erica tetralix-Sphagnum papillosum</i> mire • M1: <i>Sphagnum auriculatum</i> Bog pool community <p>Influential Grazing herbivores</p>	Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include; <ul style="list-style-type: none"> • Structural species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). • Influential species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat) • Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		Site-distinctive Marsh clubmoss <i>Lycopodiella inundata</i> , Bog orchid <i>Hammarbya paludosa</i>		
Structure and function (including its typical species)	Invasive, non-native and/or introduced species	Ensure invasive and introduced non-native species are either rare or absent, but if present are causing minimal damage to the feature	<p>Invasive or introduced non-native species can be a serious potential threat to the structure and function of these habitats, because they are able to exclude, damage or suppress the growth of their associated typical species, reduce structural diversity of the habitat and prevent the natural regeneration of characteristic site-native species. Once established, the measures to control such species may also impact negatively on the features of interest (e.g. use of broad spectrum pesticides).</p> <p>In 2009/ 2010 a study in the New Forest showed that <i>Crassula helmsii</i>, was distributed in a distinct pattern associated with public access. It is likely that introduction of other non-native species will show a similar pattern and is likely to be through the accidental or deliberate release by people or where vehicles and/ or equipment have been used which are likely to have come from an infected site.</p>	Ewald, N.C., 2014
Structure and function (including its typical species)	Presence/ cover of woody species	Restore a very low cover (<1% of the area) of scrub or trees within stands of H7140.	<p>Native trees and shrubs occur naturally on bog and fen surfaces but an abundance of scrub and trees on bogs and fens is sometimes regarded as detrimental because they are indicators and perpetrators of drying out and may cause damage to vegetation structure through shading effects. Birch, pine, willow and rhododendron (an invasive non-native species) are the main species of concern. The seeds of most invasive woody species are wind dispersed, so trees are able to establish on raised bog and fen surfaces.</p> <p>The retention of clumps of trees to provide cover for grazing animals is a traditional feature of the New Forest however these should not be allowed to develop in <i>Rhynchosporion</i> habitats.</p>	
Structure and function (including its typical species)	Exposed substrate	Maintain a low cover of exposed substrate of between 5-10% across the feature.	<p>For this wetland habitat type, maintaining some continuous extent of exposed, open ground surface is required to support the establishment and supply of those component species which often rely on wet and sparsely-vegetated conditions.</p> <p>High grazing pressure results in the poaching of wet heath and mire surfaces creating patches of bare peat which is a key feature of this habitat.</p> <p>Depressions on peat substrates of the <i>Rhynchosporion</i> often develop in areas</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			that are artificially disturbed, such as along peaty footpaths and trackways which can be damaged by the creation of permanent paths using imported gravels. Excessive recreation can also cause erosion and compaction of the peaty soil leading to reductions in soil invertebrates and changes in plant communities.	
Structure and function (including its typical species)	Hydrology	At a site, unit and/or catchment level (as necessary), restore natural hydrological processes to provide the conditions necessary to sustain the feature within the site	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts.</p> <p>The hydrological status of H7150 is largely dependent on the overall hydrological integrity of the larger peatland in which it is found and is highly sensitive to change. Therefore maintaining or restoring natural hydrological function of the wider peatland is critical to achieving the conservation objectives for this feature.</p> <p>From the mid-19th Century until the 1980's, drainage channels were cut into many New Forest mires and wet heaths with the aim of providing better conditions for growing timber and for grazing . This modified the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p> <p>Restoration of natural hydrological function in mires that have been drained or modified in other ways may lead to the development H7150 in associations with bog pools and runnels in valley mires but also in the slightly drier conditions which occur in the transition zone between wet heath and mire.</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Water chemistry	Restore the surface water and groundwater supporting the hydrology of the feature to a low nutrient status.	<p>UKTAG (2012) provides threshold values for nitrate concentration in groundwaters for different wetland types. The threshold values will mainly be used in the characterisation of GWDTE status for the WFD, primarily as a risk screening tool, to assess if sites are 'at risk' or 'not at risk' from groundwater mediated nutrient pressure. Due to the complex cycling of nutrients within many GWDTE, these threshold values are less well suited for application within sites but rather just to groundwater that is directly feeding the site.</p> <p>Depressions on peat substrates of the <i>Rhynchosporion</i> occurs within the context of high quality, intact mire and wet heath complexes.</p> <p>From the mid-19th Century until the 1980's, drainage channels were cut into many New Forest mires and wet heaths with the aim of providing better conditions growing timber and for grazing. This modified the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p> <p>Restoration of natural hydrological function in mires that have been drained or modified in other ways may lead to the development H7150 in associations with bog pools and runnels in valley mires but also in the slightly drier conditions which occur in the transition zone between wet heath and mire.</p>	Thomas, J.S., Diack, I. and Mainstone, C, 2016
Structure and function (including its typical species)	Hydrology	Restore a high piezometric head and permanently high water table (allowing for natural seasonal fluctuations) on groundwater dependent sites.	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts.</p> <p>Some examples of H7150 may be wholly or partly groundwater dependent. Others have a greater dependence on surface water or rain water inputs. It is critically important to understand the ecohydrological context of all sites.</p> <p>From the mid-19th Century until the 1980's, drainage channels were cut into many New Forest mires and wet heaths with the aim of providing better conditions growing timber and for grazing. This modified the natural hydrology and hydrochemistry affecting both the character and natural communities of</p>	Mainstone C, Hall R & Diack I., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>the feature.</p> <p>Restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p>	
Structure and function (including its typical species)	Adaptation and resilience	Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site	See the notes for this attribute in Table 1 above.	<p>Natural England, 2015</p> <p>Mainstone C, Hall R & Diack I., 2016</p>
Structure and function (including its typical species)	Supporting off-site habitat	Maintain the extent, quality and spatial configuration of land or habitat surrounding or adjacent to the site which is known to support the feature	The structure and function of the qualifying habitat, including its typical species, may rely upon the continued presence of areas which surround and are outside of the designated site boundary. Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species. This supporting habitat may be critical to the typical species of the feature to support their feeding, breeding, roosting, population dynamics ('metapopulations'), pollination or to prevent/reduce/absorb damaging impacts from adjacent land uses e.g. pesticide drift, nutrient enrichment.	
supporting processes (on which the feature relies)	Air quality	Restore as necessary, the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	See the notes for this attribute in Table 1 above.	<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 (www.apis.ac.uk).</p> <p>Natural England, 2014</p>
Supporting processes (on which the feature relies)	Conservation measures	Restore the management measures (either within and/or outside the site boundary as appropriate) which are necessary to restore the structure, functions and supporting processes	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	Natural England, 2014

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		associated with the feature	<p>for the underpinning SSSI and/or management agreements. This habitat in most cases requires ongoing cutting or grazing maintain its open character.</p> <p>Maintenance or restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p> <p>A high level of grazing is of fundamental importance to the management of this feature in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest, ensuring that mires and wet heath have an extensive structural diversity and sufficient bare peat to maintain this feature.</p>	
Version Control				
Advice last updated: n/a				
Variations from national feature-framework of integrity-guidance: n/a				

Table 7: Supplementary Advice for Qualifying Features: H7230. Alkaline fens; Calcium-rich spring water-fed fens

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	Restore the total extent of the H7230 feature.	<p>See the notes for this attribute above.</p> <p>In the New Forest, Alkaline fens form an integral part of the heathland complex and together with grassland, woodland, pond and stream habitats are on an extensive scale and form a dynamic mosaic fluctuating naturally over time.</p> <p>Alkaline fens are not widespread in the site but the New Forest examples are extremely rich, support rare species and demonstrate very good transitions with other wetland types.</p> <p>Whilst the current area of the feature has not been measured, it is likely that its extent has declined over time.</p>	
Extent and distribution of the feature	Spatial distribution of the feature within the site	Maintain the distribution and configuration of the H7230 feature, including where applicable its component vegetation types, across the site	<p>Distribution includes the spatial pattern or arrangement of this habitat feature, and its component vegetation types, across the site. Changes in distribution may affect the nature and range of the vegetation communities present, the operation of the physical, chemical, and biological processes in the system and the resiliency of the site and its features to changes or impacts.</p> <p>Most occur on small valley side seepage step mires scattered across the south of the SAC. They also occur in association with wet grasslands and valley mires.</p>	New Forest LIFE Partnership, 2001
Structure and function (including its typical species)	Vegetation community composition	<p>Ensure the component vegetation communities of the feature are referable to and characterised by the following National Vegetation Classification type:</p> <p><i>Eleocharis quinquefolia-Drepanocladus revolvens</i> mire' a lowland form of NVC Community: M10a: <i>Carex dioica-Pinguicula vulgaris</i> mire - <i>Carex viridula oedocarpa-Juncus bulbosus</i></p>	<p>This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management.</p> <p>In the UK these have been categorised by the National Vegetation Classification (NVC). Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. For this feature this may typically be the M9, M10 & M13 types</p>	New Forest LIFE Partnership, 2001.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p>sub-community</p> <p><i>Eleocharis spp-Campyllum stellatum</i> mire - <i>Narthecium ossifragum</i> -<i>Drosera rotundifolia</i> sub-community', which incorporates the NVC community: M14 <i>Schoenus nigricans</i> -<i>Narthecium ossifragum</i> mire.</p>		
Structure and function (including its typical species)	Invasive, non-native and/or introduced species	<p>Ensure invasive and introduced non-native species are either rare or absent, but if present are causing minimal damage to the feature</p>	<p>Invasive or introduced non-native species can be a serious potential threat to the structure and function of these habitats, because they are able to exclude, damage or suppress the growth of their associated typical species, reduce structural diversity of the habitat and prevent the natural regeneration of characteristic site-native species. Once established, the measures to control such species may also impact negatively on the features of interest (e.g. use of broad spectrum pesticides).</p> <p>In 2009/ 2010 a study in the New Forest showed that <i>Crassula helmsii</i>, was distributed in a distinct pattern associated with public access. It is likely that introduction of other non-native species will show a similar pattern and is likely to be through the accidental or deliberate release by people or where vehicles and/ or equipment have been used which are likely to have come from an infected site.</p>	Ewald, N.C., 2014
Structure and function (including its typical species)	Presence/ cover of woody species	<p>Maintain a low cover of woody species of not more than 10% scrub/tree cover.</p> <p>No woody species in flushes or springs; low <i>Salix</i> spp acceptable more than 5m from edge of spring/flush feature.</p>	<p>Native trees and shrubs occur naturally on bog and fen surfaces but an abundance of scrub and trees on bogs and fens is sometimes regarded as detrimental because they are indicators and perpetrators of drying out and may cause damage to vegetation structure through shading effects. Birch, pine, willow and rhododendron (an invasive non-native species) are the main species of concern. The seeds of most invasive woody species are wind dispersed, so trees are able to establish on raised bog and fen surfaces.</p> <p>The retention of clumps of trees to provide cover for grazing animals is a traditional feature of the New Forest however these should not be allowed to develop in or adjacent to alkaline fen and associated wet habitats.</p>	
Structure and function	Browsing and grazing by	Maintain appropriate levels of grazing,	The New Forest flora and fauna have adapted to the long tradition of extensive grazing management associated with commoning and associated	New Forest LIFE Partnership, 2001.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
(including its typical species)	herbivores		<p>common rights.</p> <p>These habitat features are often preferentially grazed which encourages a diversity of species.</p> <p>Removal or a significant long term reduction in grazing pressure would cause rapid changes in the plant and animal communities and the overall impact would be a rapid expansion to dominance of the more aggressive and competitive species.</p>	
Structure and function (including its typical species)	Exposed substrate	Maintain the exposure of the substrate to appropriate levels, which will typically be between 5-25% across feature.	<p>For this wetland habitat type, maintaining some continuous extent of exposed, open ground surface is required to support the establishment and supply of those component species which often rely on wet and sparsely-vegetated conditions. The open nature and sometimes skeletal nature of the substrate supporting these features requires a higher upper threshold than for some other wetlands.</p> <p>Grazing pressure results in the poaching of habitat surface creating patches of bare ground.</p>	
Structure and function (including its typical species)	Integrity of tufa features	Ensure that no more than 1% of the vegetation in which tufa is visible is showing signs of damage or disturbance	Tufa is a fragile soft porous rock composed of calcium carbonate which is deposited as lime-rich subterranean water issues out from springs and chemically interacts with the air. It is easily damaged or disturbed.	
Structure and function (including its typical species)	Key structural, influential and/or distinctive species	<p>Maintain the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature :</p> <p>Structural Constant and preferential plant species of the: <i>Eleocharis quinquefolia</i>- <i>Drepanocladus revolvens</i> mire' a lowland form of NVC Community: M10a: <i>Carex dioica</i>-<i>Pinguicula vulgaris</i></p>	See the notes for this attribute above.	New Forest LIFE Partnership, 2001.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p>mire - <i>Carex viridula</i> <i>oedocarpa</i>-<i>Juncus bulbosus</i> sub-community</p> <p><i>Eleocharis spp</i>-<i>Campylium stellatum</i> mire - <i>Narthecium ossifragum</i> -<i>Drosera rotundifolia</i> sub-community', which incorporates the NVC community: M14 <i>Schoenus nigricans</i> -<i>Narthecium ossifragum</i> mire.</p> <p>Influential Grazing herbivores</p> <p>Site-Distinctive Common butterwort <i>Pinguicula vulgaris</i>, Broad leaved cottongrass <i>Eriophorum latifolium</i>, Narrow Mushroom-Headed Liverwort <i>Preissia quadrata</i></p>		
Structure and function (including its typical species)	Hydrology	<p>At a site, unit and/or catchment level (as necessary), restore natural hydrological processes to provide the conditions necessary to sustain the feature within the site, including a high piezometric head and permanently high water table (allowing for natural seasonal fluctuations).</p>	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts.</p> <p>H7230. Alkaline fens are highly sensitive to change. Maintaining or restoring areas with natural hydrological function is critical to achieving the conservation objectives for this feature From the mid-19th Century until the 1980's, drainage channels were cut into many New Forest mires and wet heaths with the aim of providing better conditions for growing timber and for grazing . This modified the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p>	<p>Thomas, J.S., Diack, I. and Mainstone, C., 2016</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Water chemistry	Maintain the low nutrient status of water irrigating the feature, ensuring it is rich in base ions, particularly calcium.	<p>UKTAG (2012) provides threshold values for nitrate concentration in groundwaters for different wetland types. The threshold values will mainly be used in the characterisation of GWDTE status for the WFD, primarily as a risk screening tool, to assess if sites are 'at risk' or 'not at risk' from groundwater mediated nutrient pressure. Due to the complex cycling of nutrients within many GWDTE, these threshold values are less well suited for application within sites but rather just to groundwater that is directly feeding the site.</p> <p>Drainage and other modifications such as recreational and access infrastructure modify the natural hydrology and hydrochemistry which affects both the character and natural communities of the feature.</p> <p>Maintaining or restoring natural hydrological function is critical to achieving the conservation objectives for this feature.</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016
Structure and function (including its typical species)	Adaptation and resilience	Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site	See the notes for this attribute above.	Natural England, 2015 Mainstone C, Hall R & Diack I., 2016
Structure and function (including its typical species)	Functional connectivity with wider landscape	Maintain the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site	See the notes for this attribute above.	
supporting processes (on which the feature relies)	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values	See the notes for this attribute above.	More information about site-relevant Critical Loads and Levels for this SAC is available by using the 'search by

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).		site' tool on the Air Pollution Information System (www.apis.ac.uk). Natural England, 2014
Supporting processes (on which the feature 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 feature	<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>In the New Forest H7230. Alkaline fens form part of the valley mire complex on low-nutrient, base-rich flushes often associated with lime rich marl. It is very sensitive to changes in water regime and chemistry/nutrient status. Maintenance or restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p> <p>Grazing is of fundamental importance to the management of the New Forest in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest.</p>	New Forest LIFE Partnership, 2001.
Version Control				
Advice last updated: n/a				
Variations from national feature-framework of integrity-guidance: n/a				

Table 8: Supplementary Advice for Qualifying Features: H91D0. Bog woodland *

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	Maintain the total extent of the H91D0 feature at c.33 hectares.	<p>There should be no measurable reduction (excluding any trivial loss) in the extent of this feature. Area measurements given may be approximate depending on the nature, age and accuracy of data collection. The extent of an Annex I habitat feature covers the sum extent of all of the component vegetation communities present and may include transitions and mosaics with other closely-associated habitat features.</p> <p>H91D0. Bog woodland in the New Forest forms part of a complex mosaic of habitats including extensive dry and wet heaths and associated valley mires, streams, ponds, temporary pools, dry and wet grasslands and woodlands Together these habitats are on an extensive scale and form a dynamic mosaic fluctuating naturally over time.</p> <p>Where a reduction in the extent of a feature is considered necessary to meet the Conservation Objective for another Annex I feature, Natural England will advise on this on a case-by-case basis.</p>	New Forest LIFE Partnership, 2001.
Extent and distribution of the feature	Spatial distribution of the feature within the site	Maintain the distribution and configuration of the feature, including where applicable its component vegetation types, across the site	<p>A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes. This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat.</p> <p>Smaller fragments of habitat can typically support smaller and more isolated populations which are more vulnerable to extinction. These fragments also have a greater amount of open edge habitat which will differ in the amount of light, temperature, wind, and even noise that it receives compared to its interior. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Within the New Forest, this feature is quite widespread within the valley mires.	
Structure and function (including its typical species)	Vegetation community composition	<p>Ensure the component vegetation communities of the feature are referable to and characterised by the following National Vegetation Classification types:</p> <ul style="list-style-type: none"> W4b: Downy Birch-Purple Moor-grass woodland - Soft-rush sub community (<i>Betula pubescens-Molinia caerulea woodland - Juncus effusus</i> sub-community) 	<p>This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC).</p> <p>Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. This will also help to conserve their typical plant species (i.e. the constant and preferential species of a community), and therefore that of the SAC feature, at appropriate levels (recognising natural fluctuations).</p> <p>The community occurs on peat typically along the central zone of the larger valley mires.</p>	
Structure and function (including its typical species)	Vegetation structure - canopy cover	Maintain an appropriate tree canopy cover across the feature, which will typically be between 30-90% of the site	<p>Canopy cover is the overall proportion of vegetative cover consisting of any woody layer ranging from established regeneration to mature and veteran stages. Woodland canopy density and structure is important because it affects ecosystem function and in particular microclimate, litterfall, soil moisture, nutrient turnover and shading; this in turn influences the composition of plants and animals in lower vegetation layers and soil.</p> <p>Canopy dominated by <i>Betula pubescens</i> with varying amounts of <i>Salix cinerea</i> and occasional <i>Alnus glutinosa</i> over an open bog habitat.</p> <p>Open canopies with just scattered trees will have less of a woodland character and reduced diversity of woodland-dependent species (although they may be still be important as a form of woodland-pasture). Completely closed canopies across the whole woodland are not ideal either however, as they cast heavier shade and support fewer species and have little space where tree regeneration could occur.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Vegetation structure - open space	Maintain areas of permanent/temporary open space within the woodland feature, typically to cover approximately 50% of area due to permanently wet soils and slow tree growth	Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning. Having some open, sunlit and largely tree-less areas as part of the woodland community is often important to facilitate natural tree and shrub regeneration and also to provide supporting habitat for specialist woodland invertebrates, birds, vascular and lower plants. Such open space can be permanent or temporary and may consist of managed grazed areas or naturally-produced gaps caused by disturbance events such as windthrow/fire/tree falling over/snow damage. The trees are likely to be widely spaced due to difficulties establishing on the wet surface.	
Structure and function (including its typical species)	Vegetation structure - old growth	Maintain the extent and continuity of undisturbed, mature/old growth stands (typically comprising at least 10% of the feature at any one time) and the assemblages of veteran and ancient trees (typically 5-10 trees per hectare).	Good woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning. For this habitat type, old or over-mature elements of the woodland are particularly characteristic and important features, and their continuity should be a priority. Bog woodland occurs in long term stable combinations with valley mires, some in the New Forest such as Church Moor are ancient.	
Structure and function (including its typical species)	Vegetation structure - age class distribution	Maintain at least 3 age classes (pole stage/ medium/ mature) spread across the average life expectancy of the commonest trees.	A distribution of size and age classes of site-native tree and shrub species that indicate the bog woodland will continue in perpetuity, and will provide a variety of the woodland habitats and niches expected for this type of woodland at the site in question.	
Structure and function (including its typical species)	Adaptation and resilience	Maintain the resilience of the feature by ensuring a diversity (at least 2 species) of site-native trees including Downy Birch <i>Betula pubescens</i> and Alder <i>Alnus glutinosa</i> across the site.	This recognises the increasing likelihood of natural habitat features needing to absorb or adapt to wider environmental changes. Resilience may be described as the ability of an ecological system to cope with, and adapt to environmental stress and change whilst retaining the same basic structure and ways of functioning. Such environmental changes may include changes in sea levels, precipitation and temperature for example, which are likely to affect	Mainstone C, Hall R & Diack I., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>the extent, distribution, composition and functioning of a feature within a site. The vulnerability and response of features to such changes will vary.</p> <p>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>A natural hydrological regime provides the best defence against climate change, maximising the ability of these ecosystems to adapt to changing conditions.</p>	
Structure and function (including its typical species)	Browsing and grazing by herbivores	Maintain browsing at a (low) level that maintains a well-developed understorey with no obvious browse line, & lush ground vegetation with some grazing sensitive species evident (bramble, ivy etc.), and tree seedlings and sapling common in gaps.	In the New Forest, this habitat is strongly influenced by the variable grazing pressure of New Forest ponies and cattle. As these habitats typically occur along the central axis of valley mires, grazing prevents the expansion and dominance of molinia, birch and willow at the expense of species rich mire whilst maintaining the ancient stand,	New Forest LIFE Partnership, 2001.
Structure and function (including its typical species)	Regeneration potential	Maintain the potential for sufficient natural regeneration of desirable trees and shrubs; typically tree seedlings of desirable species (measured by seedlings and <1.3m saplings - above grazing and browsing height) should be visible in sufficient numbers in gaps, at the wood edge and/or as regrowth as appropriate	The regeneration potential of the woodland feature must be maintained if the wood is to be sustained and survive, both in terms of quantity of regeneration and in terms of appropriate species. This will include regeneration of the trees from saplings or suckers, regrowth from coppice stools or pollards. Browsing and grazing levels must permit regeneration at least in intervals of 5 years every 20. The density of regeneration considered sufficient is less in wood pasture sites than in high forest. Regeneration from pollarding of veteran trees should be included where this is happening.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Tree and shrub species composition	Maintain a canopy and understorey of which 95% is composed of site native trees and shrubs <i>Betula pubescens</i> , <i>Salix cinerea</i> , <i>Alnus glutinosa</i>	Native trees and shrubs in general support a greater diversity of associated species than non-native species, especially amongst groups of invertebrates which depend directly on trees for food and shelter. There are many plants and animals which use or co-exist with non-native trees, but many rare and threatened woodland species are specialists adapted to one or a few native trees or shrub species (birches and willows are examples of trees that host many specialist insect species).	
Structure and function (including its typical species)	Key structural, influential and/or distinctive species	Restore the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat feature; Structural The constant and preferential plants of W4b: Downy Birch-Purple Moor-grass woodland - Soft-rush sub community (<i>Betula pubescens-Molinia caerulea</i> woodland - <i>Juncus effusus</i> sub-community) Influential Grazing Livestock including New Forest Ponies, cattle and deer Site-distinctive White sedge <i>Carex curta</i>	Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include; • Structural species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). • Influential species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat) • Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary. The list of species given here for this Annex I habitat feature at this SAC is not necessarily exhaustive. The list may evolve, and species may be added or deleted, as new information about this site becomes available.	New Forest LIFE Partnership, 2001.
Structure and function (including its typical species)	Invasive, non-native and/or introduced species	Ensure invasive and introduced non-native species are either rare or absent, but if present are causing minimal damage to the	Invasive or introduced non-native species are a serious potential threat to the biodiversity of native and ancient woods, because they are able to exclude, damage or suppress the growth of native tree, shrub and ground species (and their associated typical species),	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
species)		feature	<p>reduce structural diversity and prevent the natural regeneration of characteristic site-native species.</p> <p>Once established, the measures to control such species may also impact negatively on the features of interest (e.g. use of broad spectrum pesticides). Such species can include Japanese knotweed, giant hogweed and Himalayan balsam, for example. Similarly, this would include pheasants, rabbits and non-native invertebrate 'pest' species. Scots pine is not native to the New Forest and is highly invasive.</p>	
Structure and function (including its typical species)	Soils, substrate and nutrient cycling	Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the habitat.	<p>Soil is the foundation of basic ecosystem function and a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms. Soil biodiversity has a vital role to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.</p> <p>Apart from a few of the strata, the series of geological deposits of the New Forest produce base poor, acidic soils.</p>	
Supporting processes (on which the feature relies)	Functional connectivity with wider landscape	Maintain the overall extent, quality and function of any supporting features within the local landscape which provide a critical functional connection with the site	See the notes for this attribute above.	
Supporting processes (on which the feature relies)	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	<p>See the notes for this attribute above.</p> <p>A restore target has been included here as the Critical Loads and levels are currently being exceeded as present and present a risk to this feature.</p>	<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 (www.apis.ac.uk).</p> <p>Natural England, 2014</p>
Supporting processes	Hydrology	At a site, unit and/or catchment level as necessary, restore	Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives	Thomas, J.S., Diack, I. and Mainstone, C., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
(on which the feature relies)		natural hydrological processes to provide the conditions necessary to sustain the feature within the site	<p>for this site and sustaining this feature.</p> <p>Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts.</p> <p>Bog woodlands rely on hydrological processes (especially permanent wetness) for their ecological functioning.</p> <p>From the mid-19th Century until the 1980's, drainage channels were cut into many New Forest mires with the aim of providing better conditions for growing timber and grazing. This modified the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p> <p>Bog woodland is highly sensitive to hydrological change which can lead to a loss of characteristic species. Maintaining or restoring natural hydrological function of the wider peatland is critical to achieving the conservation objectives for this feature.</p>	
Supporting processes (on which the feature relies)	Illumination	Ensure artificial light is maintained to a level which is unlikely to affect natural phenological cycles and processes to the detriment of the feature and its typical species at this site.	Woodland biodiversity has naturally evolved with natural patterns of light and darkness, so disturbance or modification of those patterns can influence numerous aspects of plant and animal behaviour. For example, light pollution (from direct glare, chronically increased illumination and/or temporary, unexpected fluctuations in lighting) can affect animal navigation, competitive interactions, predator-prey relations, and animal physiology. Flowering and development of trees and plants can also be modified by un-natural illumination which can disrupt natural seasonal responses.	
Version Control				
Advice last updated: n/a				
Variations from national feature-framework of integrity-guidance: n/a				

Table 9: Supplementary Advice for Qualifying Features: H91E0. Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion albae*); Alder woodland on floodplains*

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	<p>Maintain the total extent of the H91E0 feature at c212ha.</p> <p>Restore the total extent of the H91E0 feature which remains within woodland plantation inclosures. The actual area of the feature is unknown</p>	<p>See the notes for this attribute above in Table 9.</p> <p>Alluvial woodland within the New Forest forms part of a complex mosaic of habitats including extensive dry and wet heaths and associated valley mires, streams, ponds, temporary pools, dry and wet grasslands and woodlands Together these habitats are on an extensive scale and form a dynamic mosaic fluctuating naturally over time.</p> <p>Stands of alluvial woodland were also located within the plantation inclosures. Many of these habitats have been degraded by forestry operations such as drainage and planting of trees but where they are partially intact, there is the potential for restoration.</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>
Extent and distribution of the feature	Spatial distribution of the feature within the site	<p>Maintain the distribution and configuration of the feature, including where applicable its component vegetation types, across the site</p>	<p>A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes. This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat.</p> <p>Smaller fragments of habitat can typically support smaller and more isolated populations which are more vulnerable to extinction. These fragments also have a greater amount of open edge habitat which will differ in the amount of light, temperature, wind, and even noise that it receives compared to its interior. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.</p> <p>Within the New Forest SAC, old growth riverine woodland is</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			distributed on alluvial mineral soils along the various watercourses.	
Structure and function (including its typical species)	Vegetation community composition	<p>Ensure the component vegetation communities of the feature are referable to and characterised by the following National Vegetation Classification types:</p> <ul style="list-style-type: none"> • W7: Alder-Ash-Yellow Pimpernel woodland (<i>Alnus glutinosa-Fraxinus excelsior-Lysimachia nemorum</i> woodland) • W8: Ash-Maple-Dogs Mercury Woodland (<i>Fraxinus excelsior-Acer campestre-Mercurialis</i> Woodland) 	<p>This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC).</p> <p>Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature. This will also help to conserve their typical plant species (i.e. the constant and preferential species of a community), and therefore that of the SAC feature, at appropriate levels (recognising natural fluctuations).</p> <p>New Forest Riverine Woodland comprises those woodland stands with occasional to abundant <i>Alnus glutinosa</i> and frequent <i>Fraxinus excelsior</i> on wet mineral or peaty soils along water courses. Woodland stands on flood plains which, where not damaged by over deepening of drainage channels, flood seasonally as water levels rise along meandering natural flood channels containing debris dams. Species intolerant of such conditions are rare (e.g. beech) or confined to slightly raised areas, and rich alluvial soils with higher base status produce a very rich woodland flora, though modified by grazing animals.</p> <p>These woodlands form part of a dynamic mosaic with open habitats such as <i>molinia</i> meadows and their structure and function are best maintained with extensive grazing by livestock to maintain their distinctiveness and species richness.</p> <p>Where car parks and other access points are located in close proximity to stretches of riverine woodland, considerable recreational pressure is exerted locally resulting in eroded banks, excessive bare ground and impoverished vegetation. Areas of particular concern are Balmer Lawn, Ivy Wood, Ober</p>	Natural England, 2014

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Corner, Puttles Bridge, Wooton Bridge and Millyford Bridge.	
Structure and function (including its typical species)	Vegetation structure - canopy cover	Maintain an appropriate tree canopy cover across the feature, which will typically be between 30-90% of the site	<p>Canopy cover is the overall proportion of vegetative cover consisting of any woody layer ranging from established regeneration to mature and veteran stages. Woodland canopy density and structure is important because it affects ecosystem function and in particular microclimate, litterfall, soil moisture, nutrient turnover and shading; this in turn influences the composition of plants and animals in lower vegetation layers and soil.</p> <p>Open canopies with just scattered trees will have less of a woodland character and reduced diversity of woodland-dependent species (although they may be still be important as a form of woodland-pasture). Completely closed canopies across the whole woodland are not ideal either however, as they cast heavier shade and support fewer species associated with edges, glades and open grown trees, and have little space where tree regeneration could occur. This occurs within plantation inclosures where planted trees create heavy shade. In general, the woodland canopy of this feature should provide a core of woodland interior conditions with some open and edge habitat as well.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Vegetation structure - open space	Maintain areas of permanent/temporary open space within the woodland feature, typically to cover approximately 10% of area	<p>Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>Having some open, sunlit and largely tree-less areas as part of the woodland community is often important to facilitate natural tree and shrub regeneration and also to provide supporting habitat for specialist woodland invertebrates, birds, vascular and lower plants. Such open space can be permanent or temporary and may consist of managed grazed areas, glades, or naturally-produced gaps caused by disturbance events such as windthrow/fire/tree falling over/snow damage.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Vegetation structure - old growth	Maintain the extent and continuity of undisturbed, mature/old growth stands	Good woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
typical species)		(typically comprising at least 20% of the feature at any one time) and the assemblages of veteran and ancient trees (typically >10 trees per hectare).	functioning. For this habitat type, old or over-mature elements of the woodland are particularly characteristic and important features, and their continuity should be a priority.	Assessments
Structure and function (including its typical species)	Vegetation structure - dead wood	Maintain the continuity and abundance of frequent standing or fallen dead and decaying wood, including >10 standing dead trees per hectare	Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning. Dead and actively decaying wood, either as part of a standing tree or as a fallen tree on the woodland floor, is an important component of woodland ecosystems, and supports a range of specialist invertebrates, fungi, lichens and bryophytes, and associated hole-nesting birds and roosting bats, all of which may be very typical of the feature. The New Forest has a plentiful supply of deadwood which supports a rich diversity of invertebrate fauna and creates natural debris dams in the streams which form part of natural hydrological process.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Vegetation structure - age class distribution	Maintain at least 3 age classes (pole stage/ medium/ mature) spread across the average life expectancy of the commonest trees.	A distribution of size and age classes of the major site-native tree and shrub species that indicate the woodland will continue in perpetuity, and will provide a variety of the woodland habitats and niches expected for this type of woodland at the site in question.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Vegetation structure - shrub layer	Maintain an understorey of shrubs covering 10 - 60% of the stand area (this will vary with light levels and site objectives)	Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning. This is richer in W8 stands than the W7 stands where the shrub layer can be quite poor with <i>salix spp</i> holly <i>Ilex aquifolium</i> on the drier areas.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Vegetation structure - woodland edge	Maintain a graduated woodland edge into adjacent semi-natural open habitats, other woodland/wood-pasture types or scrub.	Woodland edge is defined as being the transitional zone between the forest feature and adjacent but different habitat types - the best woodland edges will have a varied structure in terms of height and cover. Many typical forest species make regular use of the edge habitats for feeding due to higher herb	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			layer productivity and larger invertebrate populations. Grasslands / arable fields managed with high doses of agro-chemicals could potentially not allow this gradation of woodland edge and could have other impacts on the integrity of the site (pollution/ nutrient enrichment etc.).	
Structure and function (including its typical species)	Adaptation and resilience	Maintain the resilience of the feature by ensuring a diversity (at least 3 species) of site-native trees across the site including Alder <i>Alnus glutinosa</i> , Pedunculate Oak <i>Quercus rober</i> Ash <i>Fraxinus excelsior</i> , <i>Salix</i> spp.	<p>This recognises the increasing likelihood of natural habitat features needing to absorb or adapt to wider environmental changes. Resilience may be described as the ability of an ecological system to cope with, and adapt to environmental stress and change whilst retaining the same basic structure and ways of functioning. Such environmental changes may include changes in sea levels, precipitation and temperature for example, which are likely to affect the extent, distribution, composition and functioning of a feature within a site.</p> <p>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>Restoration of a natural hydrological regime provides the best defence against climate change, maximising the ability of these ecosystems to adapt to changing conditions.</p>	Mainstone C, Hall R & Diack I., 2016
Structure and function (including its typical species)	Browsing and grazing by herbivores	Restore browsing at a low level that allows well developed understorey with no obvious browse line, & lush ground vegetation with some grazing sensitive species evident (bramble, ivy etc.), and tree seedlings and sapling common in gaps.	<p>Herbivores, especially deer, ponies, cattle and pigs are an integral part of New Forest woodland ecosystems. They are important in influencing woodland regeneration, composition and structure and therefore in shaping woodland wildlife communities. In general, both grazing and browsing is desirable to promote both a diverse woodland structure and seedling establishment.</p> <p>The open aspect of the New Forest woodlands, long continuity of tree cover and the presence of high numbers of ancient trees has resulted in the development of exceptionally rich habitats, particularly for saproxylic invertebrates, epiphytic lichens and bryophytes, fungi and breeding birds. Short periods with lower levels of grazing can allow fresh natural regeneration of trees,</p>	Natural England, 2014

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			but a long-term absence of herbivores can result in excessively dense thickets of young trees which shade out ground flora and lower plant species. However, heavy grazing, particularly by deer prevents woodland regeneration, reduces flowering and decreases the overall availability of nectar sources for woodland invertebrates. . It can cause excessive trampling and/or poaching damage, canopy fragmentation, heavy browsing and barkstripping.	
Structure and function (including its typical species)	Regeneration potential	Restore the potential for sufficient natural regeneration of desirable trees and shrubs; typically tree seedlings of desirable species (measured by seedlings and <1.3m saplings - above grazing and browsing height) should be visible in sufficient numbers in gaps, at the wood edge and/or as regrowth as appropriate ;	<p>The regeneration potential of the woodland feature must be maintained if the wood is to be sustained and survive, both in terms of quantity of regeneration and in terms of appropriate species. This will include regeneration of the trees and shrubs from saplings or suckers, regrowth from coppice stools or pollards, and where appropriate planting.</p> <p>The key aspect is that there should be sufficient regeneration to maintain canopy cover in the long term, so sporadic regeneration may be adequate. The density of regeneration considered sufficient is less in wood pasture sites than in high forest. Regeneration from pollarding of veteran trees should be included where this is happening. Regeneration from non-site native species should not be included.</p>	<p>Natural England. Definitions of Favourable Condition for designated features of interest for the New Forest SSSI</p> <p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>
Structure and function (including its typical species)	Tree and shrub species composition	Maintain a canopy and understorey of which 95% is composed of site native trees and shrubs	<p>Native trees and shrubs in general support a greater diversity of associated species than non-native species, especially amongst groups of invertebrates which depend directly on trees for food and shelter.</p> <p>There are many plants and animals which use or co-exist with non-native trees, but many rare and threatened woodland species are specialists adapted to one or a few native trees or shrub species (birches, willows and oaks, are examples of trees that host many specialist insect species).</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Key structural, influential and/or	Restore the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat	Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include;	New Forest LIFE Partnership, 2001.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
species)	distinctive species	<p>Structural The constant and preferential plants of</p> <ul style="list-style-type: none"> W8: Ash-Maple-Dogs Mercury Woodland (<i>Fraxinus excelsior-Acer campestre-Mercurialis</i> Woodland) W7: Alder-Ash-Yellow Pimpernel woodland (<i>Alnus glutinosa-Fraxinus excelsior-Lysimachia nemorum</i> woodland) <p>Influential Grazing herbivores</p> <p>Site-distinctive Veilwort <i>Pallavicinia lyellii</i></p>	<ul style="list-style-type: none"> Structural species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). <p>The W8 stands within the New Forest are likely to be amongst the richest lowland woods in Britain.</p> <ul style="list-style-type: none"> Influential species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat). <p>The vegetation composition of the New Forest is very diverse largely due to the long history of grazing by commoners livestock. Grazing pressure is not uniform and this provides a range of niches for organisms adapted to the extensive grazing regime. Continuation of traditional grazing based on the existence of Rights of Common is fundamental to maintaining the characteristic vegetation composition of the New Forest alluvial woodland.</p> <ul style="list-style-type: none"> Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. <p>There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary.</p> <p>The list of species given here for this Annex I habitat feature at this SAC is not necessarily exhaustive. The list may evolve, and species may be added or deleted, as new information about this site becomes available.</p>	
Structure and function	Invasive, non-native and/or	Ensure invasive and introduced non-native species are either	Invasive or introduced non-native species are a serious potential threat to the biodiversity of native and ancient woods,	This attribute will be periodically monitored as part of Natural

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
(including its typical species)	introduced species	rare or absent, but if present are causing minimal damage to the feature	<p>because they are able to exclude, damage or suppress the growth of native tree, shrub and ground species (and their associated typical species), reduce structural diversity and prevent the natural regeneration of characteristic site-native species.</p> <p>Once established, the measures to control such species may also impact negatively on the features of interest (e.g. use of broad spectrum pesticides). Such species can include Rhododendrons, snowberry, Japanese knotweed, giant hogweed and Himalayan balsam, for example. Similarly, this would include pheasants, rabbits and non-native invertebrate 'pest' species.</p> <p>The feature is prone to invasion by Sycamore <i>Acer pseudoplatanus</i> which should be controlled to cover values of below 1% or eradicated.</p>	England's SSSI Condition Assessments
Structure and function (including its typical species)	Soils, substrate and nutrient cycling	Restore the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the habitat.	<p>Soil is the foundation of basic ecosystem function and a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms. Soil biodiversity has a vital role to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.</p> <p>Where car parks and other access points are located in close proximity to stretches of riverine woodland, considerable recreational pressure is exerted locally resulting in eroded banks, excessive bare ground, compacted soils and impoverished vegetation.</p> <p>Trampling from human activities can cause soil compaction, changes to soil hydrology and with heavy use, bank erosion and compacted bare ground. This leads to reductions in soil invertebrates and changes in plant communities.</p> <p>The effects are most acute near to car parks located in close proximity to stretches of riverine woodland.</p>	Natural England, 2014

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting processes (on which the feature relies)	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	See the notes for this attribute above.	More information about site-relevant Critical Loads and Levels for this SAC is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk). Natural England, 2014
Supporting processes (on which the feature relies)	Water quality/ quantity	Where the feature is dependent on surface water and/or groundwater, restore water quality and quantity to a standard which provides the necessary conditions to support the feature.	<p>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.</p> <p>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. Further site-specific investigations may be required to establish appropriate water quality standards for the SAC.</p> <p>H91E0. Alluvial woodlands are associated with small streams and dependent on seasonal inundation of the floodplain.</p> <p>From the mid-19th Century until the 1980's, many New Forest rivers and streams were widened, deepened and straightened with the aim of providing better conditions for grazing and for growing timber, modifying the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p> <p>Maintenance or restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016
Supporting processes (on which the feature relies)	Functional connectivity with wider landscape	Maintain the overall extent, quality and function of any supporting features within the local landscape which provide a	See the notes for this attribute above.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		critical functional connection with the site		
Supporting processes (on which the feature relies)	Hydrology	At a site, unit and/or catchment level (as necessary), restore natural hydrological processes to provide the conditions necessary to sustain the feature within the site	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts. Alluvial forests can be dynamic in nature, being part of successional habitats and transitions to drier woodlands. Hydrological processes (including periodic inundation) are critical to how they function and must not be negatively impacted.</p> <p>H91E0. Alluvial woodlands are associated with small streams and dependent on seasonal inundation of the floodplain. From the mid-19th Century until the 1980's, many New Forest rivers and streams were widened, deepened and straightened with the aim of providing better conditions for grazing and for growing timber, modifying the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature. Maintenance or restoration of natural hydrological function is critical to achieving the conservation objectives for this feature.</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016
Supporting processes (on which the feature relies)	Illumination	Ensure artificial light is maintained to a level which is unlikely to affect natural phenological cycles and processes to the detriment of the feature and its typical species at this site.	Woodland biodiversity has naturally evolved with natural patterns of light and darkness, so disturbance or modification of those patterns can influence numerous aspects of plant and animal behaviour. For example, light pollution (from direct glare, chronically increased illumination and/or temporary, unexpected fluctuations in lighting) can affect animal navigation, competitive interactions, predator-prey relations, and animal physiology. Flowering and development of trees and plants can also be modified by un-natural illumination which can disrupt natural seasonal responses.	
Version Control Advice last updated: 18 March 2019 following stakeholder feedback – Target for Extent of feature within the site attribute amended to include where restoration may be possible.				
Variations from national feature-framework of integrity-guidance: n/a				

Table 10. Supplementary Advice for Qualifying Features: H9120. Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*) Beech forests on acid soils; H9130. *Asperulo-Fagetum* beech forests Beech forests on neutral to rich soils; and H9190. Old acidophilous oak woods with *Quercus robur* on sandy plains

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Extent and distribution of the feature	Extent of the feature within the site	<p>For H9120, H9130, H9190 feature:</p> <p>Restore the total current extent of the features to c2920 hectares comprising:</p> <p>H9120 Atlantic acidophilous beech – c2000ha H9130 <i>Asperulo-fagetum</i> beech woods – c400ha H9190 Old acidophilous oak – 120ha</p> <p>Restore the total extent broadleaf plantation on former pasture woodland to H9120, H9130 and H9190 features. The actual area of the restorable features is unknown.</p>	<p>There should be no measurable reduction (excluding any trivial loss) in the extent and area of this feature, and in some cases, the full extent of the feature may need to be restored. The baseline-value of extent given has been generated using data gathered from the listed site-based surveys. Area measurements given may be approximate depending on the methods, age and accuracy of data collection, and as a result this value may be updated in future to reflect more accurate information.</p> <p>The extent of an Annex I habitat feature covers the sum extent of all of the component vegetation communities present and may include transitions and mosaics with other closely-associated habitat features. Where a feature is susceptible to natural dynamic processes, there may be acceptable variations in its extent through natural fluctuations</p> <p>Approximately 400 ha of pasture woodland is enclosed within forestry plantation with the consequent loss of traditional grazing management. Much of it still retains the characteristics of pasture woodland and could be restored.</p> <p>Within forestry plantation inclosures are broadleaf plantations on former pasture woodland which given sufficient time and opened up to grazing by commoners livestock could develop back into Annex 1 woodland habitats.</p> <p>Where a reduction in the extent of a feature is considered necessary to meet the Conservation Objective for another Annex I feature, Natural England</p>	New Forest LIFE Partnership, 2001.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>will advise on this on a case-by-case basis. For this feature, this attribute includes the extent of semi-natural wood-pasture mosaic area; tree'd area; the number of veteran trees (except through natural causes), including dead and living trees. Tree roots (particularly of veteran trees) may extend a considerable distance beyond the boundary of the site.</p> <p>New Forest woodland together with its heathland, valley mires, streams, ponds, temporary pools, dry and wet grasslands are on an extensive scale and form a dynamic mosaic fluctuating naturally over time</p> <p>A reduction of woodland/wood-pasture area - whether at the edge or in the middle of a site will reduce the core area where wood-pasture conditions are found - these support significant assemblages of species dependent on woodland conditions (e.g. lichens and bryophytes - being one example)</p> <p>Loss of any woodland area which fragments a site into different parts may interrupt the movement of species between the remaining parts of the woodland, especially those with limited powers of dispersal.</p>	
Extent and distribution of the feature	Spatial distribution of the feature within the site	<p>For H9120, H9130, H9190 feature:</p> <p>Maintain the distribution and configuration of the features, including where applicable their component vegetation types, across the site</p>	<p>A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes.</p> <p>This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat.</p> <p>Smaller fragments of habitat can typically support</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>smaller and more isolated populations which are more vulnerable to extinction. These fragments also have a greater amount of open edge habitat which will differ in the amount of light, temperature, wind, and even noise that it receives compared to its interior. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature.</p> <p>In addition to the core and most extensive part of the SAC, the site also includes additional parcels of land containing woodland referable to H9120, H9130 and H9190 features at Whiteparish Common, Loosehanger Wood, Langley Wood and Franchises Wood in the north.</p>	
Structure and function (including its typical species)	Adaptation and resilience	<p>For H9120, H9130, H9190 feature: Maintain the resilience of the feature by ensuring a diversity (at least 2 species) of site-native trees (e.g. oak <i>Quercus spp</i>, downy birch <i>Betula pendula</i>) and holly <i>Ilex aquifolium</i>) across the site.</p> <p>H9130 Maintain a diversity (at least 3 species on more base rich sites) of site-native trees (e.g. beech <i>Fagus sylvatica</i>, ash <i>Fraxinus excelsior</i>, whitebeam <i>Sorbus aria</i>, yew, <i>Taxus baccata</i>, holly <i>Ilex aquifolium</i>) across the site.</p>	<p>This recognises the increasing likelihood of natural habitat features needing to absorb or adapt to wider environmental changes. Resilience may be described as the ability of an ecological system to cope with, and adapt to environmental stress and change whilst retaining the same basic structure and ways of functioning.</p> <p>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.</p> <p>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>The overall vulnerability of this SAC to climate change has been assessed by Natural England (2015) as being</p>	NATURAL ENGLAND, 2015

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>moderate], taking into account the sensitivity, fragmentation, topography and management of its habitats.</p> <p>This means that this site is considered to be vulnerable overall but are a lower priority for further assessment and action. Individual species may be more or less vulnerable than their supporting habitat itself. In many cases, change will be inevitable so appropriate monitoring would be advisable.</p> <p>In many cases, change will be inevitable so further site assessment and appropriate monitoring is recommended.</p>	
Structure and function (including its typical species)	Browsing and grazing by herbivores	<p>For H9120, H9130, H9190 feature:</p> <p>Restore browsing/grazing (e.g. by livestock) to sufficient levels to allow tree seedlings and saplings the opportunity to exceed browse height, and which maintain the characteristic structure of the woodland features in areas already grazed and restore the characteristic structure of the woodland features in areas not currently grazed.</p>	<p>Herbivores, especially deer, ponies, cattle and pigs are an integral part of woodland ecosystems. They are important in influencing woodland regeneration and have long played an important role in defining the structure and nature of the New Forest pasture woodlands, developing and maintaining a high forest tree canopy interspersed with glades in a mosaic of other woodland and heathland habitats and therefore in shaping distinctive wildlife communities.</p> <p>The open aspect of the New Forest woodlands, long continuity of tree cover and the presence of high numbers of ancient trees has resulted in the development of exceptionally rich habitats, particularly for saproxylic invertebrates, epiphytic lichens and bryophytes, fungi and breeding birds</p> <p>In general, both grazing and browsing is desirable to promote both a diverse woodland structure and seedling establishment. Short periods with low levels or no grazing at all can allow fresh natural regeneration of trees, but a long-term absence of herbivores can result in excessively dense thickets of young trees which shade out ground flora and lower plant species, loss of open ground and changes in light condition and micro-climate. Features such lichens and bryophytes, respond</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>negatively to such change and the system becomes poorer over time for nature conservation.</p> <p>However, heavy grazing particularly by deer prevents woodland regeneration, reduces flowering and decreases the overall availability of nectar sources for woodland invertebrates and can cause excessive trampling and/or poaching damage, canopy fragmentation, heavy browsing and bark stripping. New Forest pasture woodland is dependent upon extensive grazing management to maintain its special interest. There are areas of former pasture woodland within the SAC, reliance upon deer grazing alone will not maintain the interest.</p>	
Structure and function (including its typical species)	Invasive, non-native and/or introduced species	<p>For H9120, H9130, H9190 feature:</p> <p>Ensure invasive and introduced non-native species are either rare or absent, but if present are causing minimal damage to the features</p>	<p>Invasive or introduced non-native species are a serious potential threat to the biodiversity of native and ancient woods, because they are able to exclude, damage or suppress the growth of native tree, shrub and ground species (and their associated typical species), reduce structural diversity and prevent the natural regeneration of characteristic site-native species.</p> <p>Once established, the measures to control such species may also impact negatively on the features of interest (e.g. use of broad spectrum pesticides). Such species can include Rhododendrons, <i>Gaultheria shallon</i>, Sycamore, Turkey Oak, Sweet Chestnut, Red Oak, Scots pine and other non-native conifer species, for example are well established in the New Forest. Low levels of long established non-native trees such as horse chestnut, sweet chestnut and walnut which may be of high value for epiphytic lichens and bryophytes may be acceptable in certain locations Similarly, this would include pheasants, rabbits and non-native invertebrate 'pest' species.</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Structure and function (including its typical species)	Key structural, influential and distinctive species	<p>For H9120, H9130, H9190 feature:</p> <p>Restore the abundance of the species listed to enable each of them to be a viable component of the Annex I habitat features;</p> <p>Structural Constant and preferential plant species of the vegetation types at this SAC</p> <p>H9120 W14: Beech - Bramble Woodland (<i>Fagus sylvatica</i> - <i>Rubus fruticosus</i> Woodland</p> <p>W15: Beech - Wavy hair-grass woodland (<i>Fagus sylvatica</i> - <i>Deschampsia flexuosa</i> woodland).</p> <p>H9130 W14: Beech - Bramble Woodland (<i>Fagus sylvatica</i> - <i>Rubus fruticosus</i> Woodland</p> <p>W8b Ash – Field Maple (<i>Fraxinus excelsior</i> – <i>Acer campestre</i> – <i>Mercurialis perennis</i>) woodland Wood <i>Anemone nemorosa</i> sub-community</p> <p>H9190 W16 Oak species -Birch species -Wavy Hair-grass woodland (<i>Quercus spp.</i> -<i>Betula spp.</i></p>	<p>The New Forest woodlands are examples of old growth the woodlands that have had very little management and a long history of grazing. They support an outstanding diversity of species and the forestry inclosures have enormous potential to do the same in the long term.</p> <p>Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of an Annex I habitat feature at a particular site. These species will include;</p> <ul style="list-style-type: none"> • Structural species which form a key part of the Annex I habitat's structure or help to define that habitat on a particular SAC (see also the attribute for 'vegetation community composition'). • Influential species which are likely to have a key role affecting the structure and function of the habitat (such as bioturbators (mixers of soil/sediment), grazers, surface borers, predators or other species with a significant functional role linked to the habitat) • Site-distinctive species which are considered to be a particularly special and distinguishing component of an Annex I habitat on a particular SAC. <p>There may be natural fluctuations in the frequency and cover of each of these species. The relative contribution made by them to the overall ecological integrity of a site may vary, and Natural England will provide bespoke advice on this as necessary.</p> <p>The list of species given here for this Annex I habitat feature at this SAC is not necessarily exhaustive. The list may evolve, and species may be added or deleted, as new information about this site becomes available.</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>Definitions of Favourable Condition for designated features of interest for the New Forest SSSI</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p><i>Deschampsia flexuosa</i> woodland)</p> <p>W11 Oak-Birch-Oxalis woodland (<i>Quercus petraea</i>-<i>Betula pubescens</i>-<i>Oxalis</i> woodland)</p> <p>W10a Pedunculate Oak-Bracken-Bramble woodland (<i>Quercus robur</i>-<i>Pteridium aquilinum</i>-<i>Rubus fruticosus</i> woodland - Typical sub-community)</p> <p>Influential Grazing herbivores</p> <p>Site-distinctive Outstanding assemblage of rare and scarce woodland vascular plants including Bastard balm <i>Melittis melissopylum</i>, Angular soloman's seal <i>Polygonatum odoratum</i> and Narrow-leaved lungwort <i>Pulmonaria longifolia</i></p> <p>Outstanding assemblage of rare and scarce woodland bryophytes</p> <p>Outstanding assemblage of rare and scarce woodland lichens including <i>Megalaria laureri</i> (syn <i>Catillaria laureri</i>), <i>Parmelinopsis minarum</i> (syn <i>Parmelia minarum</i>)</p> <p>Outstanding assemblage of rare and scarce woodland Fungi including Bearded tooth fungus, <i>Hericium erinaceus</i></p>		

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		Maternity colonies of Bechstein's Bat		
Structure and function (including its typical species)	Regeneration potential	<p>For H9120, H9130, H9190 feature:</p> <p>Maintain the potential for sufficient natural regeneration of desirable trees and shrubs; typically tree seedlings of desirable species (measured by seedlings and <1.3m saplings - above grazing and browsing height) should be visible in sufficient numbers in gaps, at the wood edge and/or as regrowth as appropriate</p>	<p>The regeneration potential of the woodland feature must be maintained if the wood is to be sustained and survive, both in terms of quantity of regeneration and in terms of appropriate species. This will include regeneration of the trees and shrubs from saplings or suckers, regrowth from coppice stools or pollards.</p> <p>The key aspect is that there should be sufficient regeneration to maintain canopy cover in the long term, so sporadic regeneration may be adequate The density of regeneration considered sufficient is less in wood pasture sites than in high forest. Regeneration from pollarding of veteran trees should be included where this is happening.</p> <p>The presence of fallen timber and patches of bramble can be a critical factor in promoting regeneration in the protection it provides from grazing animals.</p> <p>Natural woodland edge fluctuations are an important aspect of the Forest ecology providing it has limited impact on adjacent heaths and grasslands where birch can colonise rapidly.</p> <p>Lack of regeneration is a particular issue in campsites located within the SAC due to soil compaction.</p>	Natural England. Definitions of Favourable Condition for designated features of interest for the New Forest SSSI
Structure and function (including its typical species)	Root zones of ancient trees	<p>For H9120, H9130, H9190 feature:</p> <p>Restore the soil structure within and around the root zones of the mature and ancient tree cohort to an un-compacted condition</p>	<p>The management of land within and around forest habitats which are characterised by ancient trees can be crucial to their individual welfare and long-term continuity, and the landscape they are part of can be just as or even more important.</p> <p>The condition of the soil surrounding such trees will affect their roots, associated mycorrhizal fungi and growth. Plants have difficulty in compacted soil because the mineral grains are pressed together, leaving little</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>space for air and water which are essential for root growth.</p> <p>This is a particular issue in campsites located within the SAC where tree surveys undertaken on behalf of the Forestry Commission in 2017 indicated that mature and veteran trees were suffering from soil compaction at the roots and displaying signs of dieback.</p> <p>Compaction of soil around the roots of trees also occurs in more than 30 car parks located within woodland.</p> <p>Unless carefully managed, activities such as construction, forestry management and trampling by grazing livestock and human feet during recreational activity may also contribute to excessive soil compaction around ancient trees.</p>	
Structure and function (including its typical species)	Soils, substrate and nutrient cycling	<p>For H9120, H9130, H9190 feature:</p> <p>Restore the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the habitats.</p>	<p>Soil is the foundation of basic ecosystem function and a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms. Soil biodiversity has a vital role to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature.</p> <p>Activities such as construction, vehicle use, forestry management and trampling by human feet during recreational activity all contribute to excessive soil compaction, changes to soil hydrology and with heavy use, erosion and compacted bare ground. This leads to reductions in soil invertebrates and changes in plant communities.</p> <p>The effects are most acute near to car parks, access points from the urban fringe and in and around</p>	Cox. J., 2010

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>campsites leading to dramatically impoverished ground vegetation. In 2010 a survey concluded that Hollands Wood Campsite had 7.37 ha of bare ground (33.5% of the camp site)</p>	
Structure and function (including its typical species)	Supporting off-site habitat	<p>H9130 only Maintain the extent, quality and spatial configuration of land or habitat surrounding or adjacent to the site which is known to support the feature</p>	<p>The structure and function of the qualifying habitat, including its typical species, may rely upon the continued presence of areas which surround and are outside of the designated site boundary.</p> <p>Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species. This supporting habitat may be critical to the typical species of the feature to support their feeding, breeding, roosting, population dynamics ('metapopulations'), pollination or to prevent/reduce/absorb damaging impacts from adjacent land uses e.g. pesticide drift, nutrient enrichment.</p>	
Structure and function (including its typical species)	Tree and shrub species composition	<p>For H9120, H9130, H9190 feature: Restore a canopy and understorey of which 95% is composed of site native trees and shrubs</p>	<p>The composition of native trees and shrubs in the pasture woodlands has evolved in response to a long history of stock grazing and timber exploitation. The re-introduction or artificial bolstering of species characteristic of other ancient woodlands in southern England is considered inappropriate</p> <p>Native trees and shrubs in general support a greater diversity of associated species than non-native species, especially amongst groups of invertebrates which depend directly on trees for food and shelter.</p> <p>There are many plants and animals which use or co-exist with non-native trees, but many rare and threatened woodland species are specialists adapted to one or a few native trees or shrub species (birches, willows and oaks, are examples of trees that host many specialist insect species).</p> <p>The composition of the shrub layer of the oak and beech woods is not typical of the woodland type as a result of the long-term grazing and browsing pressure</p>	<p>Natural England. Definitions of Favourable Condition for designated features of interest for the New Forest SSSI</p> <p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>and timber exploitation. Species normally prominent such as hazel can be very rare or absent. This is a typical feature of the site and is not necessarily negative.</p> <p>Holly is a characteristic of some of the woodland types but it can form dense impenetrable thickets, cast dense shade and alter the ground flora. Heavy shading of the lower parts of trees can also have detrimental impacts on epiphytic lichens and bryophytes, rotational Holly pollarding should be undertaken in woodlands supporting important lichen communities.</p>	
Structure and function (including its typical species)	Vegetation community composition	<p>For H9120, H9130, H9190 feature:</p> <p>Ensure the component vegetation communities of the features are broadly referable to and characterised by the following National Vegetation Classification types.</p> <p>H9120 W14: Beech - Bramble Woodland (<i>Fagus sylvatica</i> - <i>Rubus fruticosus</i> Woodland)</p> <p>W15: Beech - Wavy hair-grass woodland (<i>Fagus sylvatica</i> - <i>Deschampsia flexuosa</i> woodland).</p> <p>H9130 W14: Beech - Bramble Woodland (<i>Fagus sylvatica</i> - <i>Rubus fruticosus</i> Woodland)</p> <p>W8b Ash – Field Maple</p>	<p>This habitat feature will comprise a number of associated semi-natural vegetation types and their transitional zones, reflecting the geographical location of the site, altitude, aspect, soil conditions (especially base-status and drainage) and vegetation management. In the UK these have been categorised by the National Vegetation Classification (NVC). Maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature.</p> <p>These woodlands form part of a dynamic mosaic with open habitats such as <i>molinia</i> meadows and heathland, their structure and function are best maintained with extensive grazing by livestock to maintain their distinctiveness and outstanding species richness. The bryophyte flora (mosses and liverworts) is the richest in lowland Britain, the species of interest all highly dependent upon livestock grazing to suppress competitive vegetation growth.</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p>(<i>Fraxinus excelsior</i> – <i>Acer campestre</i> – <i>Mercurialis perennis</i>) woodland Wood <i>Anemone nemorosa</i> sub-community</p> <p>H9190 W16 Oak species -Birch species -Wavy Hair-grass woodland (<i>Quercus spp.</i> -<i>Betula spp.</i>-<i>Deschampsia flexuosa</i> woodland)</p> <p>W11 Oak-Birch-Oxalis woodland (<i>Quercus petraea</i>-<i>Betula pubescens</i>-<i>Oxalis</i> woodland)</p> <p>W10a Pedunculate Oak-Bracken-Bramble woodland (<i>Quercus robur</i>-<i>Pteridium aquilinum</i>-<i>Rubus fruticosus</i> woodland - Typical sub-community)</p>		
Structure and function (including its typical species)	Vegetation structure - age class distribution	<p>H9120 / H9130, Maintain at least 3 age classes (pole stage/ medium/ mature) spread across the average life expectancy of the commonest trees.</p> <p>H9190: Maintain at least 4 age classes (pole stage/ medium/ mature/over mature or veteran) spread across the average life expectancy of the commonest trees.</p>	<p>Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>There is great structural diversity evident in the New Forest woodlands, with a complete range of tree age classes from saplings to mature, senile and dead standing and fallen trees, together with a wide range of tree densities from closed high canopy forest to open stands with extensive heathland glades, to a more open parkland-like structure</p> <p>A distribution of size and age classes of the major site-native tree and shrub species that indicate the woodland will continue in perpetuity, and will provide a</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			variety of the woodland habitats and niches expected for this type of woodland at the site in question. .	
Structure and function (including its typical species)	Vegetation structure - ancient/veteran trees	<p>H9120 / H9190 / H9130</p> <p>Maintain at least a third of ancient/veteran trees in open locations or with open halo around them, with younger cohorts of successor trees (<100 years; 100-200 years) each present over 10% of the site.</p>	<p>Good woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning. There is great structural diversity evident in the New Forest woodlands, with a complete range of tree age classes from saplings to mature, senile and dead standing and fallen trees, together with a wide range of tree densities from closed high canopy forest to open stands with extensive heathland glades, to a more open parkland. For this Annex I habitat type, individual trees of great age and/or size (veteran or ancient trees) are particularly characteristic and important features, and their continuity should be a priority. Protecting their root systems and the forest soils around them will also be important.</p> <p>Veteran trees are potentially dangerous when in the immediate vicinity of recreational facilities such as car parks and camp sites. This has led to a significant reduction in veteran trees and dead standing wood and a decline in the nature conservation value of woodland near to recreational facilities.</p>	New Forest LIFE Partnership, 2001.
Structure and function (including its typical species)	Vegetation structure - canopy cover	<p>For H9120 / H9130 / H9190 (wood pasture with old trees)</p> <p>Maintain a canopy of open grown native trees with free crowns over between 20-80% of the site as appropriate.</p>	<p>Canopy cover is the overall proportion of vegetative cover consisting of any woody layer ranging from established regeneration to mature and veteran stages. Woodland canopy density and structure is important because it affects ecosystem function and in particular microclimate, litterfall, soil moisture, nutrient turnover and shading; this in turn influences the composition of plants and animals in lower vegetation layers and soil.</p> <p>Heavy shading of the lower parts of trees can also have detrimental impacts on epiphytic lichens and bryophytes. A total of 350 lichen species have been recorded from the pasture woodlands, of which around</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>a third are of conservation concern.</p> <p>Open canopies with just scattered trees will have less of a woodland character and reduced diversity of woodland-dependent species although they are important features of woodpasture as trees growing in a wooded situation (i.e. not open grown) may not develop into veterans of equal value to open grown individuals.. Completely closed canopies across the whole woodland are not ideal either however, as they cast heavier shade and support fewer species associated with edges, glades and open grown trees, and have little space where tree regeneration could occur. This frequently occurs within plantation inclosures where planted trees create heavy shade. In general, the woodland canopy of this feature should provide a core of woodland interior conditions with some open and edge habitat as well.</p> <p>Measures of the value of tree cohort continuity should take into account species, distribution across the site and situation (open-grown versus shaded) as well as total tree numbers. Cohort continuity is an important measure of the condition of the veteran tree resource and its potential to retain its value in the long-term.</p>	
Structure and function (including its typical species)	Vegetation structure - dead wood	<p>For H9120, H9130, H9190 feature:</p> <p>Maintain the continuity and abundance of frequent standing or fallen dead and decaying wood</p> <p>Restore the continuity and abundance of standing or fallen dead and decaying wood in campsites within woodland, typically between 30 - 50 m³ per hectare of standing or fallen</p>	<p>Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>Dead and actively decaying wood, either as part of a standing tree or as a fallen tree on the woodland floor, is an important component of woodland ecosystems, and supports a range of specialist invertebrates, fungi, lichens and bryophytes, and associated hole-nesting birds and roosting bats, all of which may be very typical of the feature.</p> <p>Some 276 invertebrate species of conservation concern</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		timber or 3-5 fallen trees >30cm per hectare, and >10 standing dead trees per hectare in campsites located within woodland	are recorded from the wealth of habitats present in the New Forest pasture woodlands. Of these a large number are saproxylic species for which a plentiful supply of fallen and standing deadwood (often associated with living trees), of all sizes and stages of decay is essential.	
Structure and function (including its typical species)	Vegetation structure - open space	<p>For H9120, H9130, H9190 feature:</p> <p>Restore areas of permanent/temporary open space within the woodland features, typically to cover approximately 10% - 40% of area</p>	<p>Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>Having some open, sunlit and largely tree-less areas as part of the woodland community is often important to facilitate natural tree and shrub regeneration and also to provide supporting habitat for specialist woodland invertebrates, birds, vascular and lower plants. Such open space can be permanent or temporary and may consist of managed grazed areas, linear rides and glades, or naturally-produced gaps caused by disturbance events such as windthrow/fire/tree falling over/snow damage.</p> <p>Open space is more important in some woodland types than others and will be less critical where there is a mosaic of open habitats nearby</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Structure and function (including its typical species)	Vegetation structure - shrub layer(for woodland pasture sites with many old trees)	<p>H9130 / H9120: Maintain or restore an understorey of shrubs and trees covering 15 - 30% of the site (this will vary with light levels and levels of grazing).</p> <p>H9190: Maintain or restore an understorey of scrub or young growth covering 10 - 25% of the site (this will vary with light levels and site objectives).</p>	<p>Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>There is more opportunity for growth of scrub or young tree growth in wood-pasture sites because of higher light levels (although this will be limited by the presence of grazing animals) in particular holly which can form dense impenetrable thickets, cast dense shade and alter the ground flora. Heavy shading of the lower parts of trees can also have detrimental impacts on epiphytic lichens and bryophytes. Rotational Holly pollarding</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>should be undertaken in woodlands supporting important lichen communities.</p> <p>A lower level of shrub cover than that normally associated with woodland is acceptable in wood pasture.</p>	
Structure and function (including its typical species)	Vegetation structure - Woodland edge (graduated edge; buffered; mosaics with other habitats)	<p>For H9120, H9130, H9190 feature:</p> <p>Maintain a graduated woodland edge into adjacent semi-natural open habitats, other woodland/wood-pasture types or scrub.</p>	<p>Woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>Woodland edge is defined as being the transitional zone between the forest feature and adjacent but different habitat types - the best woodland edges will have a varied structure in terms of height and cover.</p> <p>Many typical forest species make regular use of the edge habitats for feeding due to higher herb layer productivity and larger invertebrate populations.</p>	
Structure and function (including its typical species) (all types including wood pasture with many old trees)	Vegetation structure - old growth	<p>For H9120, H9130, H9190 feature:</p> <p>Maintain the extent and continuity of undisturbed, mature/old growth stands (typically comprising at least 20% of the feature at any one time) and the assemblages of veteran and ancient trees (typically >10 trees per hectare).</p>	<p>Good woodland structure includes variations in age, tree form, layering, the distribution and abundance of open space and dead wood. It plays a critical role in woodland ecosystem functioning.</p> <p>The New Forest pasture woodlands have not escaped management interventions in the past but have remained relatively undisturbed for the past 500 years and are rich in old-growth dependent species. The old or over-mature elements of the woodlands are particularly characteristic and important features and their continuity should be a priority.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting processes (on which the feature relies)	Air quality	<p>For H9120, H9130, H9190 feature:</p> <p>Restore as necessary, the concentrations and deposition of air pollutants to at or below the</p>	This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated	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

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		<p>site-relevant Critical Load or Level values given for these features of the site on the Air Pollution Information System (www.apis.ac.uk).</p>	<p>with it.</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 (NH₃), oxides of nitrogen (NO_x) 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.</p> <p>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.</p> <p>As part of the preparation of local plans by NFNPA and NFDC a detailed examination of potential in-combination air quality effects on New Forest SAC / SPA, and other nearby European sites has been carried out. Third party consultants have carried out an air quality assessment and linked ecological assessment which together constitute the HRA of air quality effects for both the New Forest National Park and New Forest District Local Plans. At the time of writing, these documents had not yet been finalised although draft results and conclusions are presented within them.</p>	<p>Information System (www.apis.ac.uk).</p> <p>Natural England, 2014</p>
Supporting processes (on which the feature relies)	Functional connectivity with wider landscape	<p>H9190 only</p> <p>Maintain the overall extent, quality and function of any</p>	<p>This recognises the potential need at this site to maintain or restore the connectivity of the site to its wider landscape in order to meet the conservation objectives. These connections may take the form of</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		supporting features within the local landscape which provide a critical functional connection with the site	<p>landscape features, such as habitat patches, hedges, watercourses and verges, outside of the designated site boundary which are either important for the migration, dispersal and genetic exchange of those typical species closely associated with qualifying Annex I habitat features of the site.</p> <p>These features may also be important to the operation of the supporting ecological processes on which the designated site and its features may rely. In most cases increasing actual and functional landscape-scale connectivity would be beneficial. Where there is a lack of detailed knowledge of the connectivity requirements of the qualifying feature, Natural England will advise as to whether these are applicable on a case by case basis.</p> <p>Stream and river catchments extend beyond the boundary of the site and water quality and availability can be impacted by changes anywhere within the catchment. Changes outside of the site can affect the hydrological regime within the site and have significant implications for the assemblage of characteristic plants and animals present.</p> <p>Off-site land use change driven by the planning process or caused by other activities such as agriculture, recreational demands, or infrastructure provision need to take account of this connectivity and not be to the detriment of the ongoing structure and function of the habitats on-site. Consideration needs to be given to both direct and in-direct impacts on the SAC features.</p>	
Supporting processes (on which the feature relies)	Hydrology	<p>For H9120, H9130, H9190 feature: At a site, unit and/or catchment level as necessary, restore natural hydrological processes to provide the conditions necessary</p>	<p>Defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature.</p> <p>Changes in source, depth, duration, frequency,</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
		to sustain the features within the site	<p>magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. This target is generic and further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts.</p> <p>From the mid-19th Century until the 1980's, many New Forest rivers and streams were widened, deepened and straightened with the aim of providing better conditions for grazing and for growing timber within the plantation inclosures, modifying the natural hydrology and hydrochemistry affecting both the character and natural communities of the feature.</p> <p>Maintenance or restoration of natural hydrological function is required to achieving the conservation objectives for this feature.</p> <p>Disruption/ damage to hydrological processes could be caused by activities at some distance from the site boundary. E.g. through extraction of ground or surface waters; diverting or damming river channels; pollution of water source; channel alignment that disrupts natural geomorphological processes; tunnelling etc.</p>	
Supporting processes (on which the feature relies)	Illumination	<p>For H9120, H9130, H9190 feature:</p> <p>Ensure artificial light is maintained to a level which is unlikely to affect natural phenological cycles and processes to the detriment of the feature and its typical species at this site.</p>	<p>Woodland biodiversity has naturally evolved with natural patterns of light and darkness, so disturbance or modification of those patterns can influence numerous aspects of plant and animal behaviour.</p> <p>For example, light pollution (from direct glare, chronically increased illumination and/or temporary, unexpected fluctuations in lighting) can affect animal navigation, competitive interactions, predator-prey relations, and animal physiology. Flowering and development of trees and plants can also be modified by un-natural illumination which can disrupt natural seasonal responses.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting processes (on which the feature relies)	Conservation measures	<p>For H9120, H9130, H9190 feature:</p> <p>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 features</p>	<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>Grazing is of fundamental importance to the management of the New Forest in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest.</p> <p>Maintenance or restoration of natural hydrological function is required to achieving the conservation objectives for this feature</p>	<p>New Forest LIFE Partnership, 2001.</p> <p>Natural England, 2014</p>
<p>Version Control Advice last updated: 18 March 2019 following stakeholder feedback – Target for Extent of feature within the site attribute amended to include where restoration may be possible.</p>				
<p>Variations from national feature-framework of integrity-guidance: n/a</p>				

Table 11: Supplementary Advice for Qualifying Features: S1044. *Coenagrion mercuriale*; Southern damselfly

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Population (of the feature)	Population abundance	Maintain the presence of the Southern Damselfly population at all currently known sites for the species,	<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.</p> <p>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.</p>	<p>Footprint Ecology, 2016.</p> <p>Rushbrook, B. J., Bignell, S. A., Selby, T. S., Kernohan, R.A. & Whitfield, D.G, 2014.</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Whilst we will endeavour to keep these values as up to date as possible, local Natural England staff can advise that the figures stated are the best available.	
Supporting habitat: extent and distribution	Distribution of supporting habitat	Maintain 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	<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.</p> <p>Within the New Forest, the core populations are found on Beaulieu Heath, Setley Plain and Mill Lawn Brook with a number of smaller populations at other locations. The Southern Damselfly is a poor disperser and susceptible to habitat fragmentation/loss.</p> <p>Studies have shown relatively little movement between many of the patches suitable habitat connected by the same stream (providing a corridor for movement); where movement was observed it was between adjacent sites.</p>	<p>Thompson, D.J., & Watts, P.C.; 2006.</p> <p>Thompson, D.J., Purse, B.V. & Rouquette, J.R.; 2003</p>
Supporting habitat: extent and distribution	Extent of supporting habitat	<p>Restore the total extent of the habitats which support the feature</p> <p>Streams / wet heath / mire habitats: 22.74ha</p>	<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.</p> <p>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>Due to the specific requirements of this species there will only be small areas of the wider wet heath / mire communities that suitable for southern damselfly. Most sites have their origins in springs that emerge from the Headon Beds.</p>	<p>Footprint Ecology, 2016.</p> <p>Rushbrook, B. J., Bignell, S. A., Selby, T. S., Kernohan, R.A. & Whitfield, D.G.; 2014.</p>
Supporting habitat:	Flow: base-rich runnels	Restore open, unshaded, shallow lengths of watercourse/mire with	The southern damselfly requires base-rich, shallow streams with a constant slow-to-moderate permanent flow and relatively	Thomas, J.S., Diack, I. and Mainstone, C.; 2016.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
structure/function	and heathland seepages/streams	permanent discernible flow (approx. 10 cm s-1).	<p>high water temperature.</p> <p>From the mid-19th Century until the 1980's, many New Forest streams were widened, deepened and straightened to drain adjacent wetlands with the aim of providing better conditions for growing timber and for grazing. Drainage channels were also cut into mires modifying the natural hydrology. The original damage is the cause of ongoing habitat deterioration including increased tree and scrub on mires and flood plain, headward erosion of channels in mires and over-incision in streams leading to higher flow rates</p>	
Supporting habitat: structure/function	Substrate: Base-rich runnels and heathland seepages/streams	Restore not less than 50% cover of peat or other organic substrate in watercourse/mire.	<p>The preferred supporting habitat substrate is an inorganic substrate overlaid with shallow organic peat or silt.</p> <p>From the mid-19th Century until the 1980's, many New Forest streams were widened, deepened and straightened to drain adjacent wetlands with the aim of providing better conditions for growing timber and for grazing. Drainage channels were also cut into mires modifying the natural hydrology, hydrochemistry, removing organic peat and silt and exposing underlying gravels.</p>	Thomas, J.S., Diack, I. and Mainstone, C.; 2016
Supporting habitat: structure/function	Trophic conditions :Base-rich runnels and heathland seepages/streams	Maintain water courses in a dystrophic to mesotrophic condition as indicated by a lack of algae (except brown flocculent algae), bacterial film or invasive tall emergents such as <i>Juncus effusus</i> , <i>J. acutiflorus</i> and <i>Phragmites</i> spp.	<p>A wide range of pH is found in watercourses on southern damselfly sites, although the majority of sites fall within the range 7.0–7.5.</p> <p>These conditions ensure sufficient oxygen for larval and egg development and no eutrophication and encroachment of invasive emergents and algae.</p> <p>Southern damselfly larvae require shallow, well oxygenated, base-rich water with a constant slow-to-moderate flow and within the New Forest this is typified by heathland mires, runnels and streams supplied by base rich waters permeating through calcareous formations, such as the Headon beds. The mires and network of streams within the New Forest are relatively unaffected by cultivation and development and are of</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			high ecological value.	
Supporting habitat: structure/function	Vegetation composition: scrub cover	Restore only small areas of tall scrub or trees within 20 metres of watercourse or mire but not on intervening habitat between two areas of population.	Some scattered trees and scrub associated with base-rich runnels and heathland seepages/streams can provide areas for roosting, maturation, feeding, displaying and basking.	
Supporting habitat: structure/function	Vegetation composition: Base-rich runnels and heathland seepages/streams	Restore stream lengths with cover of submerged and semi-emergent, herbaceous macrophytes including some cover of <i>Hypericum elodes</i> , <i>Potamogeton polygonifolius</i> , or <i>Ranunculus flammula</i> , with some <i>Carex spp.</i> or <i>Juncus spp.</i>	<p>The southern damselfly usually emerges from the water as final instar larvae by ascending emergent vegetation, rather than by walking onto shore. Tall rushes and sedges are known to have been used there is no consistent trend in the plant species used for emergence, but rigid stems that do not bend in the wind are likely to be selected to minimise the risk of damage to the damselfly's wings or abdomen during expansion and drying.</p> <p>The damselfly's wings and abdomen were less likely to be damaged if they did not touch surrounding vegetation during expansion and drying. The eggs are laid into water plant tissue and plant species used as oviposition substrates may include fool's watercress (<i>Apium nodiflorum</i>), marsh St John's wort (<i>Hypericum elodes</i>), bog pondweed (<i>Potamogeton polygonifolius</i>) and jointed rush (<i>Juncus articulatus</i>).</p>	Thompson, D.J., Purse, B.V. & Rouquette, J.R.; 2003
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	<p>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.</p> <p>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</p>	Natural England, 2015 Mainstone C, Hall R & Diack I.; 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>as practicable, in order to ensure the feature's long-term viability.</p> <p>The overall vulnerability to climate change of the habitats supporting this feature has been assessed by Natural England as being moderate, taking into account the sensitivity, fragmentation, topography and management of its habitats. This means the site is considered to be vulnerable overall but a medium priority for further assessment and action.</p> <p>Within the New Forest, the Southern Damselfly is at the northern edge of its range and is unlikely to be affected by any increases in temperature; the primary impact of climate change on this species will be through changes to hydrology of a site. Restoration of a natural hydrological regime provides the best defence against climate change, maximising the ability of the species to adapt to changing conditions</p>	
Supporting processes (on which the feature and/or its supporting habitat relies)	Air quality	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 (www.apis.ac.uk).	See the notes for this attribute above.	<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 (www.apis.ac.uk).</p> <p>Natural England, 2014</p>
Supporting processes (on which the feature and/or its supporting habitat relies)	Conservation measures	Restore the management measures (either within and/or outside the site boundary as appropriate) which are necessary to restore the structure, functions and supporting processes associated with the feature 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 Southern Damselfly has very particular habitat requirements for a mid-successional management dependent habitat. It is important to ensure that sites holding Southern Damselfly populations are managed according to these</p>	British Dragonfly Society, 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>requirements, as well as potentially suitable adjacent land. Due to their limited dispersal ability, only small areas of the watercourse should be managed in any one year.</p> <p>Heavy grazing is of fundamental importance to the management of the species in the New Forest creating poached conditions on the edge of a watercourse and flushes, and maintaining a suitable sward height and preventing vegetation from encroaching on the watercourse. Grazing together with traditional heathland burning management prevents scrub encroachment.</p> <p>Maintenance or restoration of natural hydrological function is critical to achieving the conservation objectives for this feature. and for potentially suitable areas close to existing populations.</p>	
Supporting processes (on which the feature and/or its supporting habitat relies)	Water quantity/ quality	Where the feature or its supporting habitat is dependent on surface water and/or groundwater restore water quality and quantity to a standard which provides the necessary conditions to support the feature	<p>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.</p> <p>From the mid-19th Century until the 1980's, many New Forest streams were widened, deepened and straightened to drain adjacent wetlands with the aim of providing better conditions for growing timber and for grazing. Drainage channels were cut into mires and wet heath modifying the natural hydrology and hydrochemistry which affects both the character and extent of the natural mosaic of wet heath, mire, runnels and pools.</p>	Thomas, J.S., Diack, I. and Mainstone, C., 2016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Restoration of natural hydrological function is critical to achieving the conservation objectives for this species.	
Version Control Advice last updated: n/a				
Variations from national feature-framework of integrity-guidance: Attributes relating to chalk streams / rivers removed as not relevant to this site				

Table 12: Supplementary Advice for Qualifying Features: S1083. *Lucanus cervus*; Stag beetle

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 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.</p> <p>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>Grazing is of fundamental importance to the management of the New Forest in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest.</p>	New Forest LIFE Partnership, 2001.
Supporting habitat: extent and distribution	Extent of supporting habitat	Maintain the total extent of the habitat which support the feature at: c8,000ha of decaying-wood rich woodland	<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.</p> <p>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>	
Supporting habitat: extent and distribution	Distribution of supporting habitat	Maintain 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	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	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			its interior. These conditions may not be suitable for this feature and this may affect its viability.	
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	<p>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 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>The overall vulnerability to climate change of the habitats supporting this feature has been assessed by Natural England as being moderate, taking into account the sensitivity, fragmentation, topography and management of its habitats. This means the site is considered to be vulnerable overall but a medium priority for further assessment and action.</p>	Natural England, 2015
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 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.	
Supporting processes (on which the feature and/or	Air quality	Maintain or, where necessary, restore concentrations and deposition of air pollutants to at or below the site-relevant Critical	See the notes for this attribute above.	More information about site-relevant Critical Loads and Levels for this SAC is available by using the 'search by site' tool on the Air

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
its supporting habitat relies)		Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).		Pollution Information System (www.apis.ac.uk). Natural England, 2014
Supporting habitat: structure/ function	Decaying-wood habitat	Maintain an abundance and constant supply of broadleaved stumps and roots in a state of decay.	Female stag beetles lay their eggs near the rotting wood and roots of broadleaved trees which are in contact with the soil so that the wood remains moist and is able to rot. Once they have mated, the females lay small, round eggs below ground in rotting wood, particularly log piles, rotting tree stumps and old fence posts. These larvae feed on the decaying wood around them for at least three years after which they will begin to pupate into adults.	
Supporting habitat: structure/ function	Woodland habitat mosaic	Maintain a well-structured woodland habitat, with sheltered, sunlit glades and rides containing stumps and other suitable decaying wood	During their short adult lives the male stag beetles will spend their days sunning themselves in an attempt to gather strength for the evening's activities of flying in search of a mate.	
Supporting processes (on which the feature and/or its supporting habitat relies)	Natural processes	Maintain the continuity of natural processes of timber decay and nutrient recycling within the site to provide plentiful decaying stumps and roots	These natural processes of decomposition and decay are important in providing optimal conditions for beetle to lay eggs and survive as larvae There is great structural diversity evident in the New Forest woodlands, with a complete range of tree age classes from saplings to mature, senile and dead standing and fallen trees	
Population (of the feature)	Population abundance	Maintain or restore the presence of the stag beetle population across its full range within the SAC, 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	PERCY, C., BASSFORD, G. & KEEBLE, V.; 2000.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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.</p> <p>There are currently no reliable means of estimating stag beetle population size other than the collation of records of direct observation of adults during the peak period of mating activity. This means that estimates inevitably include a large degree of uncertainty and will tend to vary according to recording effort. Populations are thought to vary significantly in size from year to year according to natural population cycles, and the availability and abundance of suitable larval habitat.</p> <p>Given the likely fluctuations in numbers over time, any impact-assessments should focus on the current size and range 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.</p>	
Version Control Advice last updated: n/a				
Variations from national feature-framework of integrity-guidance: n/a				

Table 13: Supplementary Advice for Qualifying Features: S1166. *Triturus cristatus*; Great crested newt

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 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.</p> <p>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>Grazing is of fundamental importance to the management of the New Forest in particular the persistence of commoning where stock, mostly cattle and ponies which are free to roam over extensive areas of the unenclosed habitats of the New Forest. Together with annual burning and cutting programmes ensuring that the ponds and surrounding habitats have an extensive structural diversity supporting a range flora and fauna.</p>	Ewald N, Dunn F, Williams P and Biggs J.; 2014
Supporting habitat: extent and distribution	Extent of supporting habitat	Maintain the total extent of Permanent and temporary ponds and associated terrestrial habitats which support the feature	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.	
Supporting habitat: extent and distribution	Distribution of supporting habitat	Maintain 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	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,	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			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.	
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	<p>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 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>The overall vulnerability of this particular SAC to climate change has been assessed by Natural England as being <i>moderate</i>, taking into account the sensitivity, fragmentation, topography and management of its habitats. This means the site is considered to be vulnerable overall but a medium 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</p> <p>Restoration of a natural hydrological regime provides the best defence against climate change, maximising the ability of these ecosystems to adapt to changing conditions</p>	<p>Natural England, 2015</p> <p>Mainstone C, Hall R & Diack I.; 2016</p>
Supporting processes (on which the feature and/or its supporting habitat relies)	Water quantity/ quality	Restore pond 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 structure and function of this habitat type.	Aquilina R, Ewald N, Biggs J.; 2015

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>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>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.</p> <p>The water quality of Hatchet Pond (H3110) is known to be deteriorating based on long-term increases in diatom reconstructed phosphorus concentrations, changes in Soluble Reactive Phosphorus 1979 - 1983 and, more recently (post 2008), on measured total phosphorus values. These changes indicate the early stages of eutrophication.</p> <p>Ponds are at risk from inputs and runoff from land adjacent to the SAC</p>	
Supporting processes (on which the feature and/or its supporting habitat relies)	Air quality	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 (www.apis.ac.uk).	<p>See notes for this attribute above.</p> <p>The supporting habitat of this feature is considered sensitive to changes in air quality.</p>	<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 (www.apis.ac.uk).</p> <p>Natural England, 2014</p>
Supporting habitat:	Overall Habitat	For this SAC, maintain an overall Great Crested Newt Habitat	The Habitat Suitability Index provides a measure of evaluating habitat quality and quantity for Great Crested Newts. The	Ewald N, Dunn F, Williams P and Biggs J 2014

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
structure/function	Suitability Index score	Suitability Index score of no less than 0.8.	<p>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.</p> <p>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>Over 84% of ponds surveyed in 2014 were surrounded by extensive habitat suitable for great crested newts.</p>	
Supporting habitat: structure/function	Presence of ponds	Maintain the number and surface area of ponds present within the site at current levels	<p>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.</p> <p>Detailed survey of extent of ponds has not yet been undertaken.</p>	
Supporting habitat: structure/function	Permanence of ponds	Maintain 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>Great crested newt may use larger temporary ponds which are unsuitable for fish, provided that they contain water over the breeding / tadpole season (February - mid-August) for at least one in every three years.</p>	
Supporting habitat: structure/function	Cover of macrophytes	Maintain a high cover of macrophytes, typically between 50-80%, within ponds supporting Great crested newt	<p>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</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			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 habitat: structure/function	Supporting terrestrial habitat	Maintain the quality of terrestrial habitat likely to be utilised by Great Crested Newts, with no fragmentation of habitat by significant barriers to newt dispersal.	<p>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.</p> <p>Good quality terrestrial habitat for 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.</p> <p>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.</p>	
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.	
Supporting habitat: structure/function	Presence of fish and wildfowl	Ensure fish and wildfowl are absent in all ponds except Hatchet Pond	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	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			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.	
Population (of the feature)	Population abundance	Maintain the abundance of the Great Crested Newt population at current levels.	<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. 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.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Whilst we will endeavour to keep these values as up to date as 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.</p>	
Population (of the feature)	Population viability	Maintain the presence of great crested newt eggs in all core breeding ponds at/to a level which is likely to maintain the abundance of the population at or above its target level.	<p>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.</p> <p>Presence of eggs can be recorded by day or night visits and surveys should be combined with visits for the adult component.</p>	
Population (of the feature)	Supporting meta-populations	Maintain the connectivity of the SAC's Great crested newt population to associated meta-populations (either within or outside of the site boundary)	<p>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.</p> <p>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.</p>	
Version Control				
Advice last updated: n/a				
Variations from national feature-framework of integrity-guidance: n/a				

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ANNEX 8

Email from Natural England dated 12th November
2021

Karl Goodbun

From: Andrew, Mary <Mary.Andrew@naturalengland.org.uk>
Sent: 12 November 2021 09:44
To: Karl Goodbun
Subject: RE: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Categories: Filed by Jodie

Dear Karl,

Thank you for your email regarding recreational disturbance impacts to the New Forest Designated sites. I now cover the Fareham Borough Council area so Joe has forwarded your email on to me.

The Zone of Influence report (available [here](#), which you may already have seen) defines a 13.8km buffer zone, as the crow flies, around the New Forest Designated sites (this is 13.79km rounded to 13.8km). Mitigation to address recreational impacts to the New Forest Designated sites is needed within this zone. There is also a 13.8-15km zone where large (EIA) developments should screen in the issue into an HRA and consider this on a case by case basis.

The location of planning application P/20/1168/OA (at 455853,108299) does appear to be just inside this 13.8km buffer zone.

Please refer to the New Forest NPA website for the Footprint Ecology reports ([here](#)), the recommendations of which we broadly support as based on latest evidence. It also includes advice that relates to Fareham and its inclusion within the zone of influence. Although Footprint Ecology have recommended that Fareham is excluded from the zone of influence, it is NE's advice that the 13.8km buffer should be applied under the precautionary approach due to postcode data that highlights uncertainty as regards to the level of impact from Fareham.

We are working with individual local planning authorities to develop suitable interim approaches (some are more progressed than others) while more strategic partnership work continues among the affected LPAs and NE together to develop a cross-boundary consistent approach for the long term.

For individual applications that are affected we suggest applicants liaise closely with the LPA to ensure suitable mitigation is provided. Mitigation can include provision of greenspace that can act to divert visitors from the designated sites, e.g. provision of Suitable Alternative Natural Greenspace (SANG) (this is applicable to larger developments), contribution to strategic SANG (liaise with LPA where this option is available); measures to 'upgrade' existing public open space close to the development may also be considered. Contributions will be required towards measures at the designated sites (e.g. access management, education and comms, monitoring) to address and monitor residual impacts.

While open greenspace is welcomed, some level of contribution towards the designated sites within the New Forest would also be needed to address residual recreational impacts. We advise that you contact the LPA in the first instance to agree a suitable rate and to discuss their developing strategic mitigation approach.

Natural England can advise via the statutory consultation route or through our chargeable [DAS](#) service, but please note we are pausing much of the DAS work until Spring 2022 due to resourcing/workload issues.

I hope that this provides some clarity for your applications moving forwards.

Best wishes,

Mary Andrew
Sustainable Development Lead Adviser

ANNEX 9

Copy of Fareham Borough Council Executive
Briefing Paper dated 7th December 2021, describing
the Interim Mitigation Solution for the New Forest
SPA / SAC / Ramsar site

FAREHAM

BOROUGH COUNCIL

Executive Briefing Paper

Date:	07 December 2021
Subject:	Implications of Natural England advice on New Forest Recreational Disturbance
Briefing by:	Director of Planning and Regeneration
Portfolio:	Planning and Development

INTRODUCTION

1. This report outlines the issue surrounding the impacts of increased recreational pressure on the New Forest designated sites, the advice from Natural England as statutory advisors on protected sites, and the interim mitigation solution. This report seeks Executive approval for the interim mitigation solution set out in the report, which will be a material consideration in the determination of planning applications.

BACKGROUND

Legal framework

2. The Conservation of Habitats and Species Regulations (2017 as amended), hereafter referred to as the 'Habitats Regulations', place significant responsibilities on the Council as competent authority for the protection of ecology. Regulation 63 requires competent authorities to undertake an 'Appropriate Assessment' of the implications of the permission, if it is likely to have a significant effect on a site protected under the Habitats Regulations, hereafter termed a 'protected site'.
3. The Appropriate Assessment process considers potential impacts against the conservation objectives of any protected sites designated for their nature conservation importance. If a likely significant effect is predicted, it is only if the competent authority can determine no adverse effect on the integrity of the site having regard to any proposed mitigation measures that permission may be granted. Therefore, if mitigation measures are not available or sufficient to avoid the adverse effect, then the competent authority would not be able to conclude that the plan or project would not have an adverse effect and should not grant planning permission.
4. Such protected sites include Special Protection Areas (SPA) designated to conserve important or threatened bird species and Special Areas of Conservation (SAC) designated to conserve important and rare habitats. Significant effects on these protected sites can be caused through a number of impact pathways such as direct or indirect habitat loss, increase of recreational disturbance, construction activities, air and water pollution.

5. It is also necessary for the competent authority to consider not only the impact of a single plan or project in isolation but the likelihood of a significant effect occurring in combination with other plans and projects.

Relevant case law

6. An established approach is that the Appropriate Assessment must use the 'precautionary principle' when determining likely significant effects. If it is not possible to rule out a likely significant effect, the competent authority must work on the basis that one exists and undertake an Appropriate Assessment. The precautionary principle also dictates that there must be certainty over the effectiveness of the mitigation measures in order to rule out any adverse effect.
7. This precautionary principle has been reinforced by a case determination from the European Court of Justice in 2018 commonly referred to as the 'Dutch Case'. The Dutch Case also clarified the requirement that mitigation is to be secured at the point of carrying out an Appropriate Assessment in order for the competent authority to conclude with certainty that any mitigation proposed would sufficiently mitigate any adverse effects arising from the plan or project in question. This 'high bar' means that, in exercising its planning functions, the Council has to carefully consider the advice of Natural England, as statutory advisor on these matters.
8. Members will be aware of the issue of nitrate neutrality which the Council has been working through in recent years, and indeed Bird Aware, the Solent Recreation Mitigation Strategy before it¹. It is the same legislation and procedural approach, involving consultation with Natural England, that needs to be followed in the case of New Forest Recreational Disturbance. By not adhering to Natural England's advice on this matter, the Council, as Local Planning Authority, runs the risk of legal challenge to its planning decisions.

Recreational Impacts on the New Forest and Natural England's subsequent advice

9. Research commissioned by six local planning authorities (Test Valley Borough Council, Eastleigh Borough Council, New Forest District Council, New Forest National Park Authority, Southampton City Council and Wiltshire Council), together with Natural England, Forestry England and with funding from central government focused on understanding the impacts of recreation arising from new development on the protected sites in the New Forest, given the location's long history as a visitor destination. The work was carried out by the specialist consultants Footprint Ecology, who have undertaken similar research in protected habitats across the UK and involved a comprehensive survey of recreational use of the New Forest using techniques such as onsite interviews, telephone surveys and vehicle counts.
10. The Footprint Ecology work identified a range of potential impacts from the projected increase in visitors to the New Forest arising from the planned new development. These impacts caused by increased recreation are listed below under broad headings. There can also be interactions between the different impacts.

¹ Recreational impacts on the Solent Coastal protected sites are addressed through the Solent Recreational Mitigation Strategy (commonly known as Bird Aware) and the requirements it sets out for new homes built within 5.6 kilometres of those protected sites.

- Disturbance;
- Fire;
- Contamination;
- Trampling/wear;
- Harvesting;
- Grazing issues
- Visitor expectation.

11. The telephone survey is significant in understanding how frequently local residents visit the woodland and heathland protected sites of the New Forest. The survey engaged with 2,000 randomly selected residents from areas surrounding the New Forest. Interviewees lived within 25km of the New Forest designated sites and sampling was undertaken within 5km bands. Sampling was weighted to the nearer 5km bands to ensure more interviews were conducted with those living relatively close to the New Forest. The questionnaire identified households who had visited the New Forest and asked particular questions relating to the reasons for visiting, activities undertaken and their visit patterns. From this, Footprint Ecology calculated the average number of visits to the New Forest protected sites for each neighbouring district or borough, which for Fareham Borough was around 15.3 visits per year per household (By way of comparison the figure for the National Park itself is 211.3 visits per year and Test Valley is 33.07 visits per year).
12. Most of the evidence from the visitor and telephone surveys was published in May 2020 but in May 2021, the steering group published a 'Zone of Influence' (ZOI) report detailing how far from the New Forest the majority of the impacts were felt. This report recommended that a 13.8km straight-line ZOI from the protected sites in the New Forest be created whereby new residential development (including tourist accommodation) within this zone would need to provide mitigation for recreational impacts. The Footprint Ecology report however, also recommended that the zone of influence should be modified to exclude the following local authorities: Fareham, Gosport, Winchester and the Isle of Wight, recognising the geography of the coastline in this area. This recommendation was based on the fact that *"the visit rates are lower in these areas and the administrative boundaries provide the most straightforward boundary to use. The Fareham boundary is around 13.9km from the bridge at Totton on the A33 (sic) (i.e. the main crossing point) so truncating the zone of influence in this way makes sense given the travel constraints posed by Southampton Water"*.
13. Despite the recommendations of the most recent Footprint Ecology report, it is Natural England's view that data resulting from the telephone survey carried out by Footprint Ecology show visit frequencies in the western parts of Fareham are similar to those in the neighbouring borough of Eastleigh (which is included in the 13.8km ZOI). This suggests the visit rate from these areas are higher than the average visit rate applied to the whole borough. It is Natural England's view that visitors originating from these parts of Fareham are likely to contribute to an in-combination effect on the protected sites. Therefore, and following a request for further clarification of their position, it is Natural England's advice that the ZOI of 13.8km be applied across the whole borough of Fareham to ensure all new development provides appropriate mitigation to ensure the necessary certainty required under the Habitats Regulations. In addition, Natural England advise that for sites up to 15km from the edge of the New Forest that require Environmental Impact Assessment (EIA) should consider whether that development will have an impact of the New Forest protected sites. The Council as competent authority

under the Habitats Regulations, must have regard to Natural England's advice as a statutory consultee, and national body responsible for the natural environment. The Council should only depart from the advice of Natural England for justified reasons: such a reason might be further alternative evidence that Fareham developments should be excluded from requiring any mitigation, or mitigation to a lesser degree.

14. Natural England advise that the Council work in close collaboration with other affected local authorities within and surrounding the New Forest designated sites to develop a strategic, cross-boundary approach to habitat mitigation for the New Forest SPA/SAC/Ramsar. Natural England has recommended that a strategic mitigation strategy is developed incorporating a package of measures including provision of suitable alternative green spaces and networks, and direct measures on the sites such as access management, education and communication, wardening, and monitoring. In advance of such a strategy being agreed and adopted, Natural England advise the Council to implement a suitable interim mitigation solution.
15. Until such an interim solution is prepared and implemented, the Council is unlikely to be able to conclude no adverse effects on the New Forest protected sites in any Appropriate Assessment carried out on residential applications that the Council decide to permit. As a result, there is the potential for a backlog to be created of undetermined planning applications for new residential development similar to that caused by the recent nutrient issue. It is therefore considered expedient to develop an interim mitigation solution in the short-term in order to avoid a growing backlog of planning permissions which will have consequences for the Council's ability to demonstrate a five-year housing land supply, which is used in planning decisions to give confidence that there is sufficient land to build the number of homes as per the housing requirement in the forthcoming five years. If this backlog were to grow, in time, there may also be an impact on the number of homes that are built in the borough and the results of the Housing Delivery Test which judges the Council on the past three years' housing delivery against the housing requirement, and applies penalties if the result is 95% or less.
16. From a Local Plan perspective, Natural England raised the issue of recreational impacts on the New Forest protected sites as part of their consultation response to the Revised Publication Plan. The Council has since submitted the Local Plan for examination with a Statement of Common Ground with Natural England agreeing that further work is required to agree the scope and nature of an interim mitigation solution which may be appropriate in advance of a more definitive solution. Whilst the Local Plan 2037 policy NE1 guards against the granting of any permission that would have an adverse impact on protected sites, whether inside or outside of the borough, the ability of developments coming forward within the plan period to mitigate recreational impacts on the New Forest protected sites will need to be considered through the Local Plan examination process. Without certainty on the ability of sites allocated in the plan to come forward with appropriate mitigation in order to meet the Borough's housing requirement, the Plan could be found unsound by an examining inspector. It is therefore imperative to progress an interim solution to sure up the Local Plan as it moves through the examination process.
17. The Council have written to Government, both the Department for Levelling Up, Housing and Communities (DLUHC), and the Department for the Environment, Food and Rural Affairs (DEFRA) raising the advice from Natural England and the implications on our ability to grant planning permissions and deliver homes as a key part of the

Government's agenda and seeking a supportive collaborative approach from themselves and Natural England. At the time of writing, responses are awaited but officers will continue to raise this issue with Government both individually and as a member of the Partnership for South Hampshire, as several of the PfSH members are affected by this same issue. Natural England accept that their advice is based on a precautionary approach and would welcome further work to understand the level of impact on the New Forest protected sites. This point is picked up in relation to monitoring in later paragraphs.

The Interim Mitigation Solution

18. This solution sets out:
 - The area in which the solution applies
 - The scope of the interim solution
 - The lifetime of the interim solution
 - The suite of measures to be provided by or funded by residential development to provide the required mitigation of recreational impacts
 - The rationale behind the interim approach and the steps required to develop a definitive solution.
19. This interim mitigation solution covers the borough of Fareham as per Natural England's advice. It deals specifically with recreational impact on the New Forest protected sites (SAC/SPA and Ramsar).
20. Mitigation measures set out in this interim solution are directed towards:
 - providing alternative recreational opportunities (to deflect potential visits away from the New Forest protected sites),
 - access management and wardening in the New Forest protected sites themselves,
 - accompanied by monitoring of the impacts and effectiveness of mitigation measures (to provide a better understanding of the impacts of recreation on the New Forest protected sites and enabling future refinements of mitigation policies and measures).
21. Whether new green spaces are created, or existing open spaces are improved in terms of accessibility and recreational function, open spaces that provide mitigation will be designed to maximise their chances of diverting Fareham Borough residents who might otherwise visit the New Forest protected sites for outdoor recreation. Evidence suggests that such alternative natural recreational greenspace should target the needs of residents who wish to go for recreational walks, with or without a dog.
22. The mitigation requirements for recreational disturbance impacts apply to all forms of new residential development resulting in a net gain of a self-contained dwellings. This includes new builds, redevelopment, changes of use, those permitted via prior approval and permitted development, affordable housing, visitor accommodation and gypsy pitches, for example.
23. A time period of up to March 2025, in line with growth assumptions in the Fareham Local Plan 2037, is proposed for this interim solution recognising the ongoing work required to understand the nature of the potential impact of the New Forest sites and the ongoing work of the steering group, of which this Council is now part. It is possible that the steering group will develop a strategic solution for mitigation of which

developers in Fareham may be able to take part. It is also possible that the monitoring work undertaken during the lifespan of the interim solution will help determine the scale of the definitive strategy, for example, refine the geographic scope within the borough and/or a refinement of the average visit rate from ongoing survey work. It will be for the definitive strategy that will follow to take advantage of further refinements in the evidence of the visitor impact on the New Forest protected sites.

24. Additional pressures will be put on the New Forest protected sites from the growth planned in neighbouring planning authority areas. Addressing and mitigating these additional impacts arising from outside the Borough of Fareham is a matter for the relevant planning authorities. Similar mitigation schemes are in place for new development in New Forest District Council and National Park Authority areas, and are in development in Test Valley, Eastleigh and Southampton along similar lines. The wider management of all visitors (including car parking arrangements, cycling, horse riding and issues with littering) in the New Forest protected sites is an issue address through the work of the New Forest National Park Authority.

Calculating the recreational mitigation required

25. In order to calculate the number of visits that are required to be mitigated, the Council used the latest report from Footprint Ecology which demonstrated that the estimated average visits per household per year to the New Forest protected sites is 15.3.
26. The Local Plan 2037 estimates that, by the end of March 2025, 1,530 net new homes will be built in the 13.8km zone of influence, creating a total additional 23,454.9 visits to the New Forest protected sites. This is the level of additional recreational pressure that needs to be mitigated.
27. Where on-site recreation mitigation is not provided, a financial contribution will be sought towards the provision of new green spaces or the enhancement of existing green spaces including provision for their long-term maintenance and management costs. These enhancements are designed to deter people from visiting the New Forest and any adverse effect on integrity of the protected sites in that location. To ensure that the programme of projects is responsive to changing circumstances and opportunities, the programme of specific projects will be maintained separately and reviewed on a regular basis to ensure that they are deliverable in the agreed timeframe.
28. It is important to monitor both the implementation of the proposed mitigation measures of the interim mitigation solution and the effectiveness of those measures in mitigating the recreational impacts of new residential development within the Borough on the condition of the protected sites in the New Forest. Information from the monitoring process will inform future reviews of the interim mitigation solution and could be used to test the appropriateness of Natural England's interpretation of the available evidence. Monitoring costs are included in the programme costs set out below and monitoring efforts are likely to include supporting monitoring in New Forest itself.
29. Natural England have advised that alongside improvements to country parks within the Borough which will reduce the impact on the New Forest protected sites, as there will still be visits that take place from residents of Fareham, a proportionate contribution is required to fund access management or wardening on those sites. Therefore, it is proposed that £6,000 per year be provided to such projects within the New Forest itself. Discussions are ongoing with the New Forest National Park Authority as to how this is

best achieved, and the intention is to review this contribution annually on the back of monitoring information.

30. The Council's Streetscene team have provided a costed list of projects totalling £300,000 over three years and including new features at flagship country parks, such as Holly Hill Woodland Park, Abbey Meadows, implementing a masterplanned set of improvements at Park Lane recreation ground, tree planting, wildflower meadow creation and interpretation panels at sites throughout the Borough. With the addition of £20,000 a year for monitoring, and £6,000 for access management/wardening in the New Forest, the total annual cost of the mitigation scheme is £126,000. Expressed as a cost per household that equates to £247.05 per net new house (£126,000 each year for three years, divided by 1,530 dwellings). This money would be collected on developments that were unable to provide on-site mitigation, via legal agreements or section 111 agreements. This figure is subject to indexation and will be revised on the 6 April each year in line with the Retail Price Index (RPI), with April 2021 being the base year.

In relation to the Council's viability assessment, this level of additional cost is considered appropriate and within the assumptions of £10,000 environmental mitigation payments per dwelling allowance included in the viability testing for the Local Plan 2037 (see reference paper Local Plan Viability Addendum May 2021). By way of comparison, the Bird Aware contributions are £595 per house.

Implementation and monitoring

31. Through an annual review of projects and implementation priorities a programme of mitigation projects will be agreed. Ensuring the delivery of mitigation projects is sufficient to meet the additional visits identified to meet the predicted housing delivery and remains in line with the implementation of new residential development will be a high priority in the overall programme for infrastructure delivery.
32. An initial tranche of projects for implementation will be programmed to cover up to March 2025 and will be delivered by the Council's Streetscene team. The projects will be prioritised based on their ability to be delivered, the likely level of visits mitigated against and the location in relation to residential development that has come forward.
33. Monitoring will involve both on-site monitoring of the use of the new or improved greenspaces as well as further work to understand the impact, and any residual impact, of Fareham residents on the New Forest protected sites, with the latter used to inform any revisions to the interim solution or the definitive strategy.

Wider benefits of the interim mitigation solution

34. Whilst this solution is fundamentally about delivering mitigation for the likely significant effect of new development in this borough on the New Forest, the provision of improvements to the network of natural greenspaces located close to people's doorsteps will bring about 'quality of life' opportunities, such as healthier lifestyles, becoming more in touch with nature, space for wildlife and natural habitat, and improved attractiveness. This in turn also enables the Council to deliver on its Corporate Strategy

priorities of protecting and enhancing the environment, and leisure opportunities for health and fun.

Conclusion

35. Without an interim solution to address the potential for adverse effects on the New Forest protected sites, it is likely that the Council's ability to grant planning permission and defend its Local Plan at examination will be drawn into question. A pragmatic interim solution is proposed for the near term to provide mitigation solutions in the form of improved open spaces within the Borough of Fareham to deflect residents from visiting the New Forest protected sites. The need for monitoring of the effectiveness of the solutions is built into a costed programme of improvements that will be funded via developer contributions on all new residential development in the Borough, where on-site mitigation is not possible. Work will continue with government departments and Natural England to further understand the impacts demonstrated in the Footprint Ecology reports and with the New Forest Steering Group to consider the potential to develop a definitive mitigation strategy.
36. The proposed solution identifies works not previously budgeted for nor proposed within the council's corporate objectives. However, the carrying out of those works and the decision to carry them out are matters outside of planning and of an executive nature and as such, the Executive are invited to approve the carrying out of such works in order for the proposed solution to be implemented.

Enquiries:

For further information on this report please contact Gayle Wootton (Ext 4328)

ANNEX 10

Nitrate Neutrality Calculations

Nitrate Calculations

- 1.1. A nitrate budget calculation was originally submitted as Appendix 5 to the Ecological Assessment which accompanied the planning application.
- 1.2. Officers wrote to the applicant in April 2021 raising several issues with the nitrate budget. A revised nitrogen statement and nitrate budget was submitted on 24th September 2021.
- 1.3. The revised nutrient budget corrected an error relating to the site area and adjusted the proposed land uses to reflect amendments made to the parameter plan after submission of the application. That budget followed the Natural England methodology (v5, June 2020) and confirms that the scheme would need to mitigate against a surplus of 68.8 kg/N/year. The revised nitrogen budget calculation also took full account of the Council's position that land secured (by s106) within the community park to mitigate effects of a permitted 27-unit scheme. should remain unchanged. For clarity, re-calculations using Natural England's updated methodology showed a lower nitrogen budget for the 27-unit scheme, hence less mitigation would be required. The updated budget accepted the Council's argument that the previously agreed / secured mitigation needed to remain unchanged.
- 1.4. The (revised) 'nitrogen statement' identifies that the proposed new community park comprises 9.88ha of which 6.78ha is in use for lowland grazing. Part of that grazing land (3.06ha) is already set aside to mitigate the near complete 27-unit housing development on the north side of Funtley Road. 3.72ha of mitigation land is therefore available at the community park site to assist in mitigation the nitrates generated from the Appeal Proposals.
- 1.5. 3.72ha of this lowland grazing land would only mitigate 29.76 kg/N/yr leaving 39.04 kg/N/yr of nitrate mitigation still needed.
- 1.6. The remaining balance of the nitrogen generated by the Appeal proposals is to be mitigated by an offsite purchase of nitrate credits from the Warnham Estate scheme. A contract is in place, with confirmation provided within this Annex.

Nitrogen Budget Calculation

Planning Application Reference No.	
Site Name:	Land south of Funtley Road, Funtley (FS2)
Additional Information:	
Date:	06.09.21

Stage 1	Calculate total Nitrogen in kg per year derived from the development that would exit the Wastewater Treatment Works (WwTW) into Solent catchments after treatment	
Step 1	Calculate additional population	
	Enter the number of units proposed	125
	Net population increase per housing unit	2.40
	Total net population increase generated by the development	300.00
Step 2	Calculate wastewater volume generated by the development	
	Water use in litres per person per day	110
	Total wastewater volume generated by the development (litres per day)	33,000
Step 3	Confirm receiving WwTW and permit limit	
	Select the wastewater treatment works the development will connect to	Peel Common
	Wastewater treatment works' permit limit (mg per litre)	9.0
	Wastewater treatment works' discharge level (mg per litre)	8.1
Step 4	Calculate total nitrogen in kg per year discharged by the WWTW	
	Deduct acceptable Nitrogen loading in wastewater (mg per litre)	6.1
	Total Nitrogen discharged by WwTW (mg per day)	201,300.0
	Total Nitrogen discharged by WwTW (kg per day)	0.2013
	Total Nitrogen discharged by WwTW (kg per year)	73.5

Stage 2	Calculate existing (pre-development) nitrogen from current land use of the development site	
Step 1	Total area of development site	
	Enter the total area of the development site (hectares)	6.09
Step 2	Identify current land uses of the development site	
	Enter area currently used for urban development (hectares)	0.68
	Enter area currently used for open space / greenfield (hectares)	0.00
	Enter area currently used for woodland (hectares)	0.00
	Enter area currently used for community food growing / catchment average (hectares)	0.00
	Enter area currently used for cereals (hectares)	0.00
	Enter area currently used for dairy (hectares)	0.00
	Enter area currently used for general cropping (hectares)	0.00
	Enter area currently used for horticulture (hectares)	0.00
	Enter area currently used for pig farming (hectares)	0.00
	Enter area currently used for lowland grazing (hectares)	5.41
	Enter area currently used for mixed farming (hectares)	0.00
	Enter area currently used for poultry farming (hectares)	0.00
	Check to help ensure that sum total of land uses in Step 2 equals site area in Step 1	6.1
Step 3	Calculate nitrogen load from current land usage	
	Total Nitrogen load from current land usage (kg per year)	80.1

Nitrogen Budget Calculation

Stage 3		Calculate nitrogen load for the non-built land uses proposed for the development site		
Step 1	Identify proposed land uses of the development site			
	Enter the total urban area to be created (hectares)		3.60	
	Enter the total designated open space / SANG area to be created (hectares)		2.49	
	Enter the total nature reserve area to be created (hectares)		0.00	
	Enter the total woodland area to be created (hectares)		0.00	
	Enter the total community orchard area to be created (hectares)		0.00	
	Enter the total community food growing / allotment area to be created (hectares)		0.00	
	<i>Check to help ensure that sum total of proposed land uses equals site area in Stage 2</i>		6.09	
Step 2	Calculate total Nitrogen load from proposed land uses			
	<i>Total Nitrogen load from future land uses (kg per year)</i>		63.93	

Stage 4		Calculate the net change in Nitrogen load from the proposed development		
Step 1	Identify Nitrogen load from wastewater (Stage 1)			
	<i>Nitrogen leaving wastewater treatment works (kg per year)</i>		73.47	
Step 2	Calculate net change in Nitrogen load from land use changes			
	<i>Total Nitrogen load from future land use (kg per year)</i>		-16.12	
Step 3	Calculate total Nitrogen budget for the development site			
	<i>Nitrogen budget for the site (kg per year)</i>		57.35	
Step 4	Calculate precautionary buffer if Nitrogen budget exceeds zero			
	<i>Precautionary Nitrogen buffer (kg per year)</i>		11.47	

Total Nitrogen budget for the proposed development (kg per year)	68.8
Development will generate additional Nitrogen - Mitigation is required Please liaise with your Local Planning Authority for advice on next steps	

November 2021

Nitrogen Mitigation at Land south of Funtley Road, Funtley

The Natural England Nitrogen Budget Calculator has been completed for the application. It calculates that the proposals, based on 125 additional dwellings on 6.09ha of land, split between 3.6ha of 'urban' area and 2.49ha of open space, creates a deficit of 68.8kg of nitrogen per year (kgN/yr).

The proposals therefore need to mitigate 68.8kgN/yr of nitrogen to be nitrogen neutral.

The proposed mitigation is to remove the land edged in red on the Change of Use (CoU) application drawings (P/20/1166/CU) out of its current use (paddocks (lowland grazing)) to mitigate this. The total area of the proposed new community park is 9.88ha. Within that area there is 6.78ha of lowland grazing i.e. the non-woodland area that will be taken out of use.

A previous application for 27 homes (ref P/17/1135/OA) already utilises 3.06ha of this mitigation land.

Overall, this leaves 3.72ha of mitigation land available to mitigate the current nitrogen impacts arising from the planning application for 125 homes.

The Natural England Guidance (Version 5 – June 2020) recommends that for land used as horse paddocks, figures for lowland grazing should be used in nitrogen calculations. It sets out that the average nitrate-nitrogen leaching rates in kg/ha for Lowland Grazing is 13kg/ha/yr. The land would then be used for open space/greenfield, as proposed in the CoU application, has a leaching rate of 5kg/ha/yr.

Nitrogen Leaching Rates from Current Land Use	
Land Use	Leaching Rate (Nitrogen kg / ha / yr)
Urban Development	14.3
Open Space / Greenfield	5
Woodland	5
Community Food Growing	26.9
Cereals	31.2
Dairy	36.2
General Cropping	25.4
Horticulture	29.2
Pig Farming	70.4
Lowland Grazing	13
Mixed	28.3
Poultry Farming	70.7
Average for Catchment	26.9

To calculate how much nitrogen is mitigated by changing the use of the land, the following calculations are undertaken:

Current use - proposed use = nitrogen credit (kgN/ha/year)

13 kg/ha/yr (lowland grazing) - 5kg/ha/yr (open space/greenfield) kg/ha/yr = 8kg/ha/yr

Therefore, removing the land out of lowland grazing, will result in an 8kg/ha/yr less leaching than lowland grazing.

To calculate the nitrogen capacity of the mitigation land you multiply the nitrogen credit by the area of mitigation land. In this case the calculation of 8kgN/ha/yr (nitrogen credit) x 3.72ha (area of mitigation land) = 29.76kgN/yr.

This leaves a residual of 39.04kgN/yr still to be mitigated.

Reside Developments has entered into an agreement with the Warnford Estate to purchase residual nitrogen credits (39.04kgN/yr) from their approved scheme (approved by Natural England and Fareham Borough Council). The Warnford Estate will submit their formal confirmation of the credits separately.

The proposals are therefore balanced and nitrogen neutral, where the scheme creates a deficit of 68.8kgN/year and mitigation land and external credits provides 68.8kgN/year (29.76kgN/yr on-site and 39.04kgN/yr off-site).

It is proposed that the council will be transferred the new community park and will therefore manage and control the on-site nitrogen mitigation land.

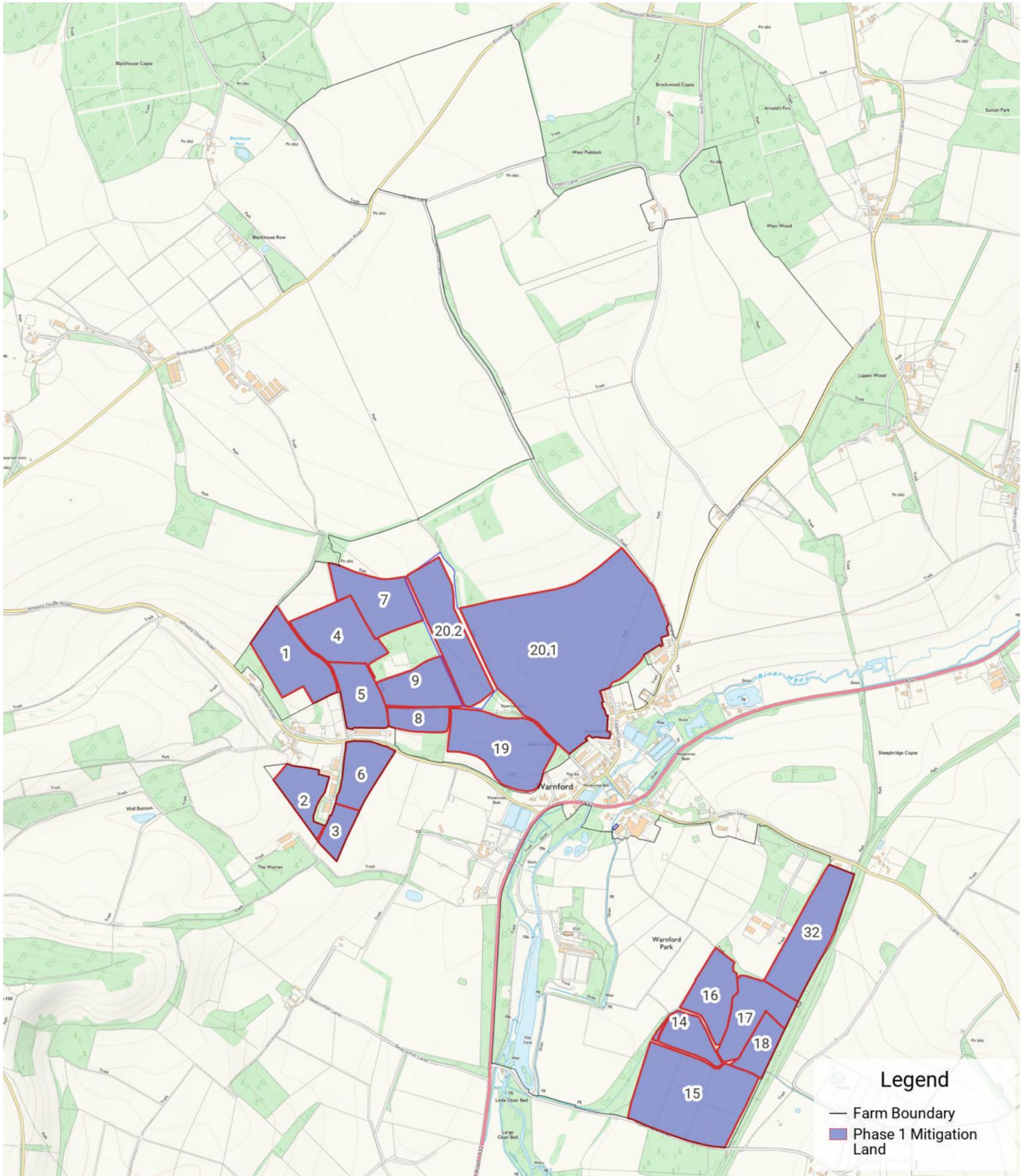
WARNFORD PARK

NITRATE MITIGATION BUDGET (APPENDIX 6)

Site: Funtley South, Funtley, Fareham
Developer: Reside Developments Ltd
Planning Application Number: P/20/1168/OA
Nitrate Mitigation Required: 39.04 kgN/yr

Mitigation Calculation:

A	Existing Land Use	1.26 hectares of land at	36.2 kgN/ha/yr =	45.61 kgN/yr
B	Proposed Land Use	1.26 hectares of land at	5.0 kgN/ha/yr =	6.30 kgN/yr
A - B = C	Total Nitrate Mitigation	=	45.61	- 6.30 = 39.31 kgN/yr



Produced on Nov 28, 2020.

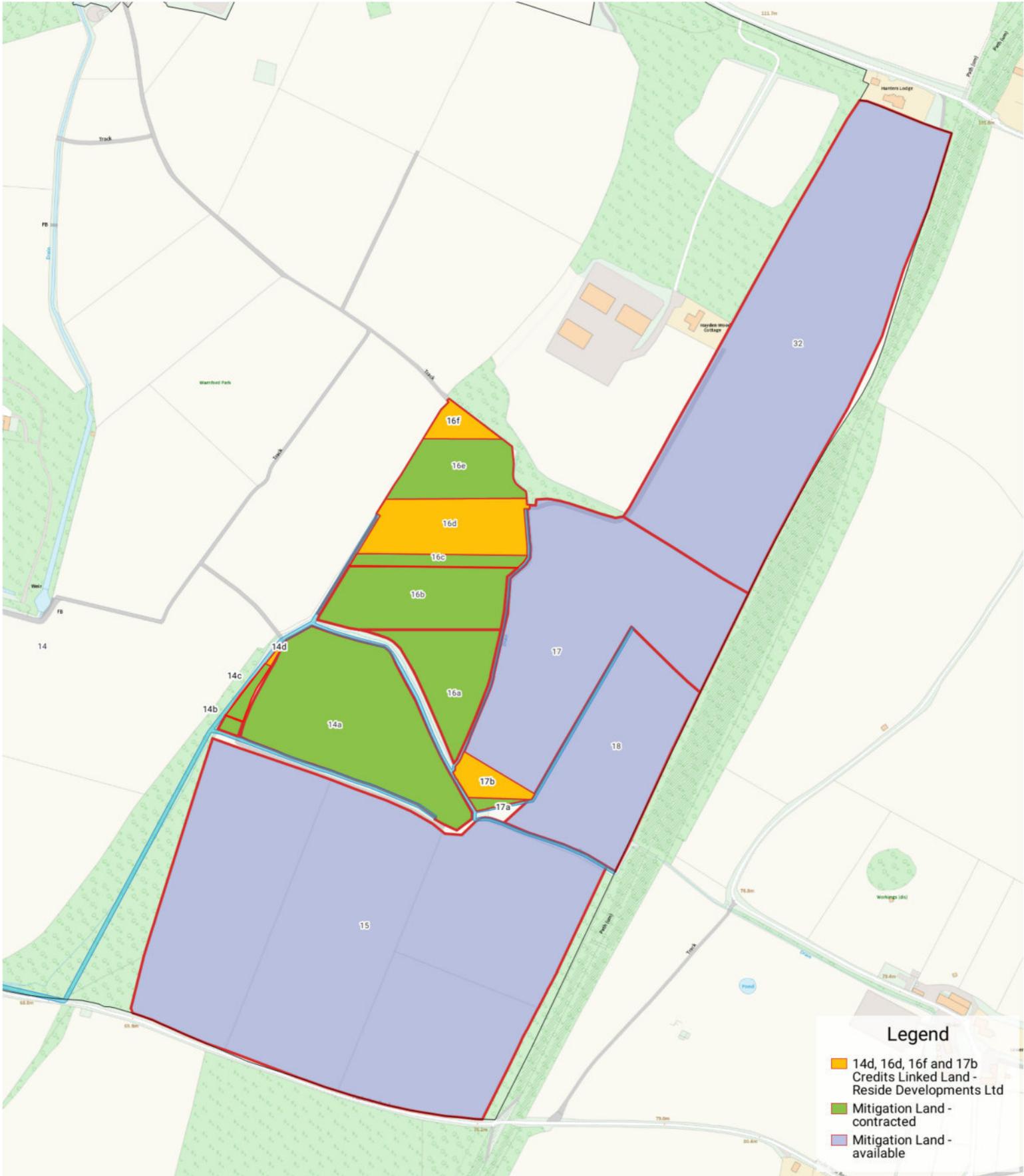
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Warnford Park

Appendix 3: Statement of Historic Land Use and Assessment of Nitrate Mitigation Values – Phase 1

A certifiable schedule of historic land use at Warnford Park is provided to substantiate the nitrate mitigation availability from Phase 1. A transparent and precautionary approach has been adopted, based on key principles agreed with Natural England.

We have followed the guidance contained within the Natural England Advice on Achieving Nutrient Neutrality for New Development in the Solent Region (June 2020) in terms of applying nitrogen loss values to the farm types.

Natural England has overseen this project since summer 2019. After extensive discussion last year, it was mutually agreed to use the ADAS standard nitrate calculations based on the actual land use for each field over the past 10 years (“Arable” or “Dairy”), rather than vary by actual levels of nitrogen input and crop type. Using this standard average format avoids discrepancies within the crop rotation, interactions with stewardship schemes and varying soil types. The Arable land was given a nitrogen value of 31.2kgN/ha/yr and the Dairy land 36.2kgN/ha/yr. It was agreed the mitigation land would be removed from agricultural production and covered with a minimum tree density to secure its new status in perpetuity (minimum 120 years). Natural England confirmed a nitrate value for this proposed land use of 5.0kgN/ha/yr and hence the change from the old system to the new provides a net gain from the Arable land of 26.2kgN/ha/yr and a net gain from the Dairy land of 31.2kgN/ha/yr.

Appendix 4 provides data capture from annual DEFRA/RPA government submissions for agricultural payment support, broken down into eligible areas (hectares) and land use codes over the past 10 years. The schedule records the areas eligible for agricultural support (the farmed areas). All the supporting government documentation has been made available and verified. Several areas of the farm which have not consistently been within the intensive arable or dairy rotation during the past 10 years have been completely excluded (“None”). The historic land use is in bold text and the nitrate mitigation availability is recorded on a per field basis.

These Phase 1 areas are high priority for the mitigation scheme due to their proximity to the River Meon and associated watercourses, plus steeply sloping topography leading to high levels of surface run off. This precautionary approach to nitrate availability per field has recently been re-approved by Natural England and we are confident underestimates the true mitigation value of the land.

ANNEX 11

Copy of 'Confirmation of Exchange' in respect of
Nitrate mitigation credits at Warnford Park Estate

Richard Wright
Principal Planner (Development Management)
Fareham Borough Council

A \ Wilson Wraight LLP
Regent House
110 Northgate Street
Bury St Edmunds
Suffolk IP33 1HP

T \ 01284 700727
E \ advice@wilsonwraight.co.uk
W \ wilsonwraight.co.uk

17th November 2021

Dear Richard Wright,

Confirmation of Exchange – Andrew Sellick – Reside Developments Ltd

Mitigation Land	All that land shown as Phase 1 edged red on the plan in Appendix 1 being part of the Warnford Park Estate and subject to the Mitigation S.106 Agreement between Fareham Borough Council, South Downs National Park Authority and Andrew Sellick dated 1 st April 2021
Mitigation Land Owner	Andrew Sellick of Gawthorpe Estates, Warnford Park, Warnford, Southampton, SO32 3LB
Credits Linked Land	1.26 hectares (see plan in Appendix 2)
Land Use Existing Proposed	Dairy land at 36.2kgN/ha/yr Woodland Planting Scheme at 5.0kgN/ha/yr
Nitrate Credits	39.04 kgN per year (see schedule in Appendix 6)
Applicant Name (Developer)	Reside Developments Ltd
Planning Application Reference Number	P/20/1168/OA
Development Site Address	Funtley South, Funtley, Fareham
Development Description	Housing
Nitrate Mitigation Required	39.04 kgN per year
Contractual Agreement (conditional on planning permission) between Mitigation Land Owner and Applicant, signed/dated	17th November 2021

I am writing to confirm that Andrew Sellick has entered into a contract to provide nitrate mitigation under the above terms.

As you will be aware, the Section 106 / Section 33 legal agreement noted above between Andrew Sellick, Fareham Borough Council and the South Downs National Park Authority, enables land at Warnford Park to be used for mitigation of the adverse effects of proposed housing development in the Borough of Fareham on the integrity of European Protected Sites as a result of increased nitrates discharged into the Solent. This is achieved by taking land on the estate out of agricultural use and implementing a woodland planting scheme.

In order to mitigate the adverse effects of this particular development, the Credits Linked Land at Warnford Park would be taken out of agricultural use. Changing the use of this parcel of land away from agricultural use would provide a reduction in nitrates as recorded in the table above. Once the mitigation is purchased and the land is bound by the legal agreement, the use of the land would be restricted as set out in the agreement to ensure no additional nitrates are added which then may find their way into the water environment.

Please find enclosed the following additional documentation:

- Appendix 1: Plan of Warnford Park Nitrate Mitigation Land – Phase 1
- Appendix 2: Detailed Plan of Mitigation Land (coloured orange, for identification purposes only)
- Appendix 3: Statement of Historic Land Use and Assessment of Nitrate Mitigation Values
- Appendix 4: Schedule of Mitigation Land per field, identifying historic land use and agreed nitrate credit availability
NB this table shows the 10 year historic land use of the Mitigation Land, as evidenced by the annual Government returns: Single Payment Scheme (former) and Basic Payment Scheme (current). These schemes provide an official record of annual land use and area and are verified by the Government via inspection processes and fines for false information. The land use was as recorded for each annual period and the land has only been used for the specified arable/dairy use for the entire 10 year period.
- Appendix 5: Schedule of Mitigation Land, identifying Contractual Arrangements
- Appendix 6: Nitrate Mitigation Budget

I trust this information is sufficient for you to be able to continue determining the current application and to carry out an Appropriate Assessment under the Conservation of Habitats and Species Regulations 2017. Please contact me should you have any questions.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'P. Walker'.

Peter Walker

Dated 17th November 2021

Agreement

Between

Andrew Sellick (1)

And

Reside Developments Ltd (2)

Relating to nitrate mitigation at the Warnford Park Estate for a prospective development site at Funtley South, Funtley, Fareham

This agreement is dated

17th November

2021

PARTIES

- (1) **ANDREW SELICK** of Warnford Park, Warnford, Southampton, SO32 3LB (**Owner**)
- (2) **RESIDE DEVELOPMENTS LIMITED** incorporated and registered in England and Wales with company number 03425192 whose registered office is at 10 Victoria Road South, Southsea, Hampshire PO2 5DA (**Developer**)

BACKGROUND

- (A) The Owner owns the property at Warnford Estate on which it is or will be managing the land in a manner designed to enable a reduction of net nitrogen emissions in a manner that creates nitrogen "Credits" available for developers to purchase to offset the adverse nitrogen impact on the Solent region by virtue of the Developer's intended development at the Development Site
- (B) The Owner has agreed to sell to the Developer some nitrogen Credits in accordance with the terms of this agreement.

AGREED TERMS

1. INTERPRETATION

The following definitions and rules of interpretation apply in this agreement.

Collins W.P.

1.1 Definitions:

39.04

Agreed Number of Credits	32.88 Credits for use exclusively in relation to the Development Land
Application	The Developer's application for Planning Permission under application reference number P/20/1168/OA
Completion Date	Subject to the Unconditional Date having occurred, the earlier of: (a) The Longstop Date; and (b) The date of completion of a sale of the whole of the freehold interest in the Development Land on the open market to an arm's length third party at the Developer's direction;
Challenge	an application for judicial review or an application pursuant to section 288 of the Town and Country Planning Act 1990 brought by a party other than the Developer (or any associate of the Developer) arising from the grant of a Planning Permission or an application to a higher court appealing against a judgment in respect of an application made to a lower court
Challenge Period	The period of 6 weeks and 10 Working Days starting on the date on which Planning Permission is granted
Condition Precedent	Both: (i) The grant of Planning Permission and either (a) the expiry of the Challenge Period where no Challenge is lodged or (b) where a Challenge is lodged, all relevant proceedings have been exhausted and have resulted in the upholding of the grant of Planning Permission; and (ii) the date of exchange of an unconditional contract for the sale of the Development Land with the benefit of Planning Permission
Contract Rate	4% per annum above the base rate from time to time of Barclays Bank plc
Court Confirmatory Decision	either: (a) a judgment of the High Court or Court of Appeal confirming the grant of Planning Permission by the Determining Authority or by the Secretary of

	State following an appeal, and the period for an appeal against such a decision has expired without a further Challenge being made; or (b) a judgment of the Supreme Court confirming the grant of Planning Permission by the Determining Authority or by the Secretary of State following an appeal
Credits	Measurements of nitrogen reduction where one Credit equates to 1 Kg of total Nitrogen reduction (as against historic discharges on the Mitigation Land) in discharges from the Mitigation Land each year
Deposit	£5,000 <i>PLUS VAT</i>
Determining Authority	The local planning authority with jurisdiction over the Application
Developer's Conveyancer	Gowling WLG (UK) LLP, 4 More London Riverside, London, SE1 2AU, United Kingdom (Ref: 2710005/RWB/JXT01)
Development Land	The land which is the subject of the Planning Application being land at Funtley South, Funtley, Fareham
Electronic Payment	payment by electronic means in same day cleared funds from an account held in the name of the Developer's Conveyancer at a clearing bank to an account in the name of the Owner's Conveyancer
Finally Determined	Where a Challenge has been made, the first of the following events to occur: (a) permission to bring a Challenge (where required) has not been granted and the period within which an application for permission to appeal against such refusal has expired without a further Challenge being made; (b) all Challenges have been withdrawn; (c) a Court Confirmatory Decision has been issued; or (d) a quashing order has been issued nullifying the Planning Permission and the Determining Authority has issued a further planning permission and the Challenge Period in respect of that planning permission has expired
Longstop Date	The date falling 12 months after the date of this agreement
Mitigation Land	Such part of the Mitigation Site (referred to in the Nitrate s106 Agreement as "Credits Linked Land") as is shown coloured orange on the Plan
Mitigation Site	The Owner's property known as Warnford Estate shown edged red on the Plan title to which is registered at the Land Registry under title number HP506221
Monitoring Authority	Southdowns National Park Authority
Nitrate s106 Agreement	An agreement relating to the Mitigation Site dated 1 April 2021 and made between (1) the Determining Authority (2) and the Monitoring Authority (3) and the Owner
Notice of Purchase	Means a Notice of Purchase (as defined in the Nitrate s106 Agreement) in relation to the Agreed Number of Credits
Owner's Conveyancer	Coffin Mew LLP (reference 197921/5/PF) of 1000 Lakeside Western Road Portsmouth PO6 3EN
Part 1 Conditions	Part 1 of the Standard Commercial Property Conditions (Third Edition - 2018 Revision) and Condition means any one of them
Part 2 Conditions	Part 2 of the Standard Commercial Property Conditions (Third Edition - 2018 Revision).
Plan	The plan attached to this agreement
Planning Permission	Planning permission granted pursuant to the Application or pursuant to any appeal against a refusal of the Application which is acceptable to the Developer in its absolute discretion
Promotion Agreement	The promotion agreement relating to the Development Land dated 10 November 2016 made between (1) Atherfold Investments Limited and (2) the Developer
Purchase Price	£164,400 plus VAT <i>£199,400 plus VAT</i>
Unconditional Date	The date on which the earlier of the following first occurs: (a) satisfaction or (b) waiver (by written notice served on the Owner by the Developer) of the Condition Precedent
VAT	value added tax or any equivalent tax chargeable in the UK

Coffin Mew LLP

Coffin Mew LLP



*Colin New UP
for and on behalf
of Andrew Sellock*

Legend

- 14d, 16d, 16f and 17b
Credits Linked Land -
Reside Developments Ltd
- Mitigation Land -
contracted
- Mitigation Land -
available



2. AGREEMENT

- 2.1** Subject to the occurrence of the Unconditional Date the Owner shall sell and the Developer shall buy the Agreed Number of Credits for the Purchase Price in accordance with the terms of this agreement.
- 2.2** On the date of this agreement, the Developer will pay the Deposit to the Owner by Electronic Payment and the Owner shall thereafter reserve the Agreed Number of Credits for the Developer until the Longstop Date. The Deposit will be released by the Owner's Conveyancer to the Owner on the date of this agreement, and is not refundable in any circumstance, but will be taken into account as part of the Purchase Price if this agreement completes.
- 2.3** The Developer may not assign, transfer, mortgage, charge, subcontract, declare a trust over or deal in any other manner with any of its rights and obligations under this agreement or any part of it EXCEPT THAT the Developer may assign the benefit of this agreement to a person (including any company) acquiring the freehold of the Development Land provided that such assignee first enters into a direct deed of covenant with the Owner in a form acceptable to the Owner (acting reasonably) whereby the assignee covenants to be bound by the obligations and covenants on the part of the Developer in this agreement.
- 2.4** The Developer cannot require the Owner to:
- (a) transfer the Agreed Number of Credits or any part of it to any person other than the owner for the time being of the Development Land; or
 - (b) transfer the Agreed Number of Credits in more than one parcel or by more than one transfer; or
 - (c) apportion the Purchase Price between different parts of the Agreed Number of Credits.

3. PLANNING & CONDITION PRECEDENT

- 3.1** The Developer confirms it has submitted the Application at its own cost to the Determining Authority.
- 3.2** The Developer will use its reasonable endeavours to obtain the Planning Permission and to enter into an unconditional contract for the purchase of the Development Land before the Longstop Date.
- 3.3** The Developer will give the Owner at least 10 working days' notice of any meetings to be held with the Determining Authority where the issue of nitrate offset may arise and will give the Owner the opportunity to attend as an observer only.
- 3.4** The Developer will supply the Owner with a copy of the decision notice on the Application or any related appeal within 3 working days of receipt.
- 3.5** Within 3 working days after exchange of unconditional contracts for the purchase of the Development Land the Developer will serve notice on the Owner confirming that it has exchanged contracts.

4. CONDITIONS

- 4.1** The Part 1 Conditions will be incorporated in this agreement so far as they:
- (a) apply to a sale by private treaty;
 - (b) can be relevant to a sale of Credits;
 - (c) are not inconsistent with the other clauses in this agreement; and
 - (d) have not been modified or excluded by any of the other clauses in this agreement.

4.2 The terms used in this agreement have the same meaning when used in the Part 1 Conditions.

4.3 References in the Part 1 Conditions to:

- (a) "seller" are references to the Owner; and
- (b) "buyer" are references to the Developer; and
- (c) "property" are references to the Agreed Number of Credits

4.4 The Part 2 Conditions will not be incorporated into this agreement.

4.5 The following Conditions are amended:

- (a) Condition 1.1.1(d) so that reference to completion date in Condition 1.1.1(d) is to the Completion Date as defined by this agreement;
- (b) Condition 1.1.1(e) so that reference to contract rate in Condition 1.1.1(e) is to the Contract Rate as defined by this agreement;
- (c) Condition 1.1.1(o) so that reference to VAT in Condition 1.1.1(o) is to VAT as defined by this agreement;
- (d) Condition 1.1.3(b), so as to read "in the case of the seller, even though a mortgage remains secured on the Mitigation Site";
- (e) Condition 9.1.1 by the deletion of the words "Completion date is twenty working days after the date of the contract";
- (f) Condition 9.4, so as to add "(d) any other sum which the parties agree under the terms of the contract should be paid or allowed on completion";
- (g) Condition 9.7 so as to read "The buyer is to pay the money due on completion by Electronic Payment and, if appropriate, by an unconditional release of a deposit held by a stakeholder"; and

4.6 The following Conditions will not apply: 2.1, 2.2, 4.1.1, 4.1.2, 4.1.3, 5, 6, 7, 8, 9.1.3, 9.5, 11, and 12

5. TITLE

5.1 The Owner's title to the Agreed Number of Credits has been accepted by the Developer prior to the date of this agreement.

5.2 The Developer is deemed to have full knowledge of the Owner's title to the Agreed Number of Credits and is not entitled to raise any objection, enquiry, requisition or claim in relation to it.

5.3 The Developer shall not register any notices against the Owner's title to the Property in relation to this agreement.

6. MATTERS AFFECTING THE PROPERTY

The Owner will sell the Agreed Number of Credits subject to the terms of the [Nitrate s106 Agreement](#).

7. COSTS

The Developer will pay the following costs to the Owner:

- (a) £3,500 plus any irrecoverable VAT towards the Owner's legal costs in connection with this Agreement payable on or before the date of this Agreement;
- (b) £2,500 plus any irrecoverable VAT towards the Owner's agency costs in connection with this Agreement payable on or before the date of this Agreement;
- (c) £3,000 plus any irrecoverable VAT to the Owner in relation to the Owner's pre-payment of the monitoring or verification contributions required to be paid to the Monitoring Authority pursuant to the Nitrate s106 Agreement on the Completion Date.

8. VAT

- 8.1 The Owner holds the Mitigation Site on trust for the Gawthorpe Estates partnership. VAT is payable on the Purchase Price and the VAT invoice for the Purchase Price will be issued by the Gawthorpe Estates partnership.
- 8.2 All consideration to be paid or provided under or pursuant to this agreement is exclusive of VAT, and where a taxable supply is made, the recipient shall pay to the supplier VAT at the same time as and in addition to that consideration's provision, in exchange for a valid VAT invoice.
- 8.3 The Owner holds the Mitigation Site as bare trustee for the Gawthorpe Estates partnership, which is the beneficial owner of the land (the "**Beneficial Owner**"), and is registered for VAT with number 182389576. The Owner enters into (and acts under) this agreement as a disclosed agent for the Beneficial Owner. In this clause 8, an obligation of the Owner is to be read as an obligation on the part of the Owner to procure that the Beneficial Owner discharges that obligation.
- 8.4 If one party (the "**Payor**") pays any amount in respect of a supposed liability to VAT and HM Revenue & Customs subsequently rule, determine or assess in writing that the whole or part of such supposed liability to VAT was not properly chargeable ("**Overpaid VAT**"), then the payee of that VAT (the "**Payee**") shall promptly:
- (a) notify the Payor of HM Revenue & Customs' determination; and
 - (b) make a written claim for the Overpaid VAT (including repayment supplement) in accordance with regulation 37 of the Value Added Tax Regulations 1995; and
 - (c) repay to the Payor the Overpaid VAT (together with any repayment supplement received from HM Revenue & Customs) received by the Payee from or credited to the Payee by HM Revenue & Customs and issue a VAT credit note to the Payor in respect of the Overpaid VAT, no later than five working days following the receipt of or credit for the amount of the Overpaid VAT.

9. COMPLETION

- 9.1 Completion will take place on the Completion Date.
- 9.2 On completion:
- a) the Developer shall pay the Purchase Price (less any Deposit previously paid) to the Owner by Electronic Payment;
 - b) the Owner covenants with the Developer to comply with the covenants contained in the schedule to the Nitrate s106 Agreement; and
 - c) on receipt of all monies due from the Developer the Owner will serve the Notice of Purchase on the Determining Authority

- 9.3 Within 5 working days of exchange of this agreement the Owner shall notify the Determining Authority that the parties have entered into this agreement and the Owner shall provide the Developer with a copy of such notice.

10. LONGSTOP

If the Condition Precedent is not either satisfied or waived (by notice in writing served by the Developer on the Owner) before the Longstop Date then either the Owner or the Developer may serve notice on the other to terminate this agreement with immediate effect.

11. TERMINATION

- 11.1 Without affecting any other right or remedy available to it, the Owner may terminate this agreement (but only prior to actual completion) with immediate effect by giving notice to the Developer if any of the following events occur:
- (a) the Developer is in fundamental or substantial breach of any of its obligations in this agreement and has failed to rectify the breach within a reasonable time after receiving notice to rectify from the Owner;
 - (b) the Developer suspends, or threatens to suspend, payment of its debts or is unable to pay its debts as they fall due or admits inability to pay its debts or (being a company or limited liability partnership) is deemed unable to pay its debts within the meaning of section 123 of the Insolvency Act 1986 or (being an individual) is deemed either unable to pay its debts or as having no reasonable prospect of so doing, in either case, within the meaning of section 268 of the Insolvency Act 1986 or (being a partnership) has any partner to whom any of the foregoing apply;
 - (c) the Developer commences negotiations with all or any class of its creditors with a view to rescheduling any of its debts, or makes a proposal for or enters into any compromise or arrangement with its creditors other than (being a company) for the sole purpose of a scheme for a solvent amalgamation of the Developer with one or more other companies or the solvent reconstruction of the Developer;
 - (d) a petition is filed, a notice is given, a resolution is passed, or an order is made, for or in connection with the winding up of the Developer (being a company) other than for the sole purpose of a scheme for a solvent amalgamation of the Developer with one or more other companies or the solvent reconstruction of the Developer;
 - (e) an application is made to court, or an order is made, for the appointment of an administrator, or if a notice of intention to appoint an administrator is given or if an administrator is appointed, over the Developer (being a company);
 - (f) the holder of a qualifying floating charge over the assets of the Developer (being a company) has become entitled to appoint or has appointed an administrative receiver;
 - (g) a person becomes entitled to appoint a receiver over the assets of the Developer or a receiver is appointed over the assets of the Developer;
 - (h) the Developer (being an individual) is the subject of a bankruptcy petition or order or makes an application for a bankruptcy order;
 - (i) a creditor or encumbrancer of the Developer attaches or takes possession of, or an execution, sequestration or other such process is levied or enforced on or sued against, the whole or any part of the Developer's assets and such attachment or process is not discharged within 14 Working Days;
 - (j) any event occurs, or proceeding is taken, with respect to the Developer in any jurisdiction to which it is subject that has an effect equivalent or similar to any of the events mentioned elsewhere in this

clause;

- (k) the Developer suspends or ceases, or threatens to suspend or cease, carrying on all or a substantial part of its business;
- (l) the Developer (being an individual) dies or, by reason of illness or incapacity (whether mental or physical), is incapable of managing his or her own affairs;
- (m) the Developer (being a company) is struck off from the Register of Companies; or
- (n) the Developer otherwise ceases to exist.

11.2 The Developer may terminate this agreement by serving written notice on the Owner if the Promotion Agreement terminates.

12. ENTIRE AGREEMENT

12.1 This agreement constitutes the whole agreement between the parties and supersedes all previous discussions, correspondence, negotiations, arrangements, understandings and agreements between them relating to its subject matter.

12.2 The Developer acknowledges that in entering into this agreement it does not rely on, and shall have no remedies in respect of, any representation or warranty (whether made innocently or negligently).

13. JOINT AND SEVERAL LIABILITY

Where the Developer comprises more than one person, those persons will be jointly and severally liable for the obligations and liabilities of the Developer arising under this agreement. The Owner may take action against, or release or compromise the liability of, or grant time or other indulgence to, any one of those persons without affecting the liability of any other of them.

14. THIRD PARTY RIGHTS

A person who is not a party to this agreement will not have any rights under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of this agreement.

15. GOVERNING LAW

This agreement and any dispute or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims) will be governed by and construed in accordance with the law of England and Wales.

This agreement has been entered into on the date stated at the beginning of it.

Signed for and on behalf of the Owner: *Andrew Sellick*

Signed for and on behalf of the Developer:



ECOLOGYSOLUTIONS

Part of the ES Group

Ecology Solutions Limited | Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ

01451 870767 | info@ecologysolutions.co.uk | www.ecologysolutions.co.uk

APPENDIX 2

sHRA Summary (December 2021)

Ecology Solutions Limited
Farncombe House
Farncombe Estate
Broadway
Worcestershire
WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
www.ecologysolutions.co.uk



7601: LAND SOUTH OF FUNTLEY ROAD, FUNTLEY

sHRA Summary and Conclusions

December 2021

Introduction

- 1.1. This sHRA report has been prepared by Ecology Solutions, in order to assist the Competent Authority (in this case the Planning Inspector appointed on behalf of the Secretary of State) when applying the legal tests associated with the Habitats Regulations. This sHRA provides sufficient information for the Competent Authority to assess the implications of the Appeal Proposals on designated sites of nature conservation importance protected under the Habitats Regulations, and sites that are given the same protection in accordance with advice in the NPPF (2021).
- 1.2. Outline planning permission is sought (by way of Appeal) to provide up to 125 one, two, three and four-bedroom dwellings including 6 Self/Custom build plots, Community Building or Local Shop (Use Class E & F.2) with associated infrastructure, new community park, landscaping and access.
- 1.3. The relevant European / Ramsar sites are as follows:
 - Portsmouth Harbour Special Protection Area (SPA), (approximately 2.8km km south of Appeal Site);
 - Portsmouth Harbour Ramsar site (approximately 2.8km km south of Appeal Site);
 - Solent and Southampton Water SPA (approximately 3.6km south of the Appeal Site);
 - Solent and Southampton Water Ramsar site (approximately 3.6km south of the Appeal Site);
 - Solent Maritime SAC (approximately 3.6km south of the Appeal Site);
 - New Forest SPA (approximately 13.1km west of the Appeal Site);
 - New Forest SAC (approximately 13.1km west of the Appeal Site);
 - and
 - New Forest Ramsar site (approximately 13.1 km west of the Appeal Site).

- 1.4. Having regard to the formal Conservation Objectives and qualifying interest features for each designated site, and also the nature of the Appeal Proposals and the distances involved, specific consideration has been given to the following pathways for likely significant effects to arise on the designated sites:
 1. Effects from traffic related air quality;
 2. Effects relating to nutrient nitrogen; and
 3. Effects from increased recreational pressure.
- 1.5. Other possible pathways for likely significant effects have been discounted.
- 1.6. The approach to assessment has been precautionary and is in line with relevant jurisprudence and guidance pertaining to assessment under the Habitats Regulations 2017 (as amended).
- 1.7. Potential significant effects from traffic related air quality have been screened out for all of the relevant designated sites, with no specific mitigation required.
- 1.8. Potential significant effects from increased recreational pressure have been screened in for all of the relevant designated sites, with Appropriate Assessment therefore required.
- 1.9. Potential significant effects relating to nutrient nitrogen have been screened in for the Solent European sites (only), with Appropriate Assessment therefore required.
- 1.10. Insofar as matters concern nutrient nitrogen, the nitrogen budget for the Appeal Proposals was calculated using Natural England methodology (v5, June 2020). This confirms that the Appeal Proposals would need to mitigate against a surplus of 68.8 kg/N/year. 3.72ha of mitigation land within the proposed community park will be used to assist in mitigating nitrates generated by the Appeal Proposals. The balance of the nitrates (39.04 kg/N/yr) is to be mitigated through the purchasing of credits from the Warnham Estate nitrate mitigation scheme. Thus, the initial credits will be secured with the Council (in the s.106) as part of the open space / community park and the Warnham Estate agreement covers the 39.04 remaining credits. A contract is already in place the Warnham Estate and it is understood that Fareham Borough Council are content that matters relating to nutrient nitrogen are resolved.
- 1.11. Regarding increased recreation pressure at the Solent European designated sites, it is standard practice among the relevant local planning authorities to seek the appropriate level of financial contribution towards the Solent Recreation Mitigation Strategy (secured by Unilateral Undertaking or Section 106). The Appellants are committed to providing the relevant financial contribution, with this being secured through an appropriate legal mechanism.
- 1.12. Regarding increased recreation pressure at the New Forest SPA / SAC / Ramsar site, full regard has been had to the position of Natural England and its view that mitigation is required, despite the separation of this designated site/s from the Appeal Site. On 7th December 2021, Fareham Borough Council's Executive Committee agreed with the recommendation to adopt

an Interim Mitigation Solution. The mitigation strategy sets out a calculated cost per dwelling of **£247.05** to be secured by legal obligation. The funds will deliver a range of measures aimed at delivering enhanced open spaces (e.g. Country Parks) in the Borough. The measures also include monitoring and a contribution towards access management and wardening at the New Forest SPA / SAC itself. The Appellants will enter into a legal obligation (e.g. Unilateral Undertaking) with Fareham Borough Council to pay the appropriate financial contribution, which would equate to **£30,881.25** based on the delivery of up to 125 units.

- 1.13. Furthermore, additional security in relation to matters concerning recreational effects is achieved through the delivery of the on-site open space (including community park). This is to be viewed as a net benefit of the Appeal Proposals, giving further comfort as to the efficacy of the proposed measures.
- 1.14. By way of overall conclusion, it can be concluded beyond reasonable scientific doubt that the Appeal Proposals deliver appropriate and proportionate mitigation / avoidance measures where required, and that subject to the securing of these measures, no adverse effect on the Integrity of any European / Ramsar site (Habitats site) will occur.

Ecology Solutions
December 2021

APPENDIX 3

Copy of Natural England email dated 17th November
2020

Cumming, Claire

Subject: FW: 331229 & 331220 NE response - P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

From: Aziz, Rebecca <Rebecca.Aziz@naturalengland.org.uk>

Sent: 17 November 2020 09:32

To: Wright, Richard <RWright@Fareham.Gov.UK>

Subject: 331229 & 331220 NE response - P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Dear Richard

RE: Fareham Borough Council - Consultation: Land to the south of Funtley Road, Funtley

Thank you for consulting Natural England. This email forms Natural England's response to the following two separate but related consultations:

- **P/20/1168/OA** - Outline application to provide up to 125 one, two, three and four-bedroom dwellings including 6 Self or Custom build plots, Community Building or Local Shop (Use Class E & F.2) with associated infrastructure, new community park, landscaping and access, following demolition of existing buildings.- Land To The South Of Funtley Road, Funtley, Fareham
- **P/20/1166/CU** - Change of use of land from equestrian/paddock to community park following demolition of existing buildings - Land South Of Funtley Road, Fareham

Natural England note the development site for the housing is already subject to an existing recent approval for scheme for 55 dwellings (application reference P/18/0067/OA). The land currently subject to the change of use application is also already subject to existing approvals for a separate development for 27 dwellings north of Funtley road (related applications P/19/0864/RM and P/18/0066/CU).

ADDITIONAL INFORMATION REQUIRED

Deterioration of the water environment – Solent nutrients

The proposals will involve an increase in residential accommodation in the Solent catchment served by a wastewater system, and therefore it is our advice that the development will need to achieve nutrient neutrality to address uncertainty with regards to nutrient overloading within the Solent European designated sites. The application is supported by a nutrient budget calculation within Appendix 4 of the supporting Planning Statement (Turley, October 2020) that outlines the development will

result in a nutrient burden of 67.3 kg TN/yr. It is intended to mitigate this burden via a change in land use to derive a net reduction in nitrogen reaching the Solent designated sites.

Mitigation

- Community Park

It is important to note that the currently approved community park provides 3.06ha of nutrient mitigation for P/19/0864/RM for 27 dwellings (north of Funtley Road) to address a nutrient budget of 24.46 kgTN/yr, as set out in the appropriate assessment and signed Section 106 associated with the development.

The Planning Statement discusses this aspect and outlines the N benefit capacity of the community park in line with the latest Natural England nutrients guidance, which takes into account an acceptable background level of 2mg/l of nitrogen in the existing water environment. It calculates an updated area of mitigation land required for development P/19/0864/RM. It then calculates the remaining capacity with the park is 5.14ha, equating to 41.12 kgTN/yr. It outlines the remainder of the budget for the current housing application will require further offsite mitigation.

It is for you as local planning authority to determine how the issue of altering the nutrient mitigation requirements associated with development P/19/0864/RM can be addressed appropriately in planning terms. A key principle of the mitigation is that it should be delivered prior to first occupation of the development, to ensure impacts from increased nutrient release into the Solent catchment are avoided.

It will be important to ensure the delivery of mitigation for application P/19/0864/RM prior to first occupation is not compromised.

- Management of on-site mitigation

To ensure it is effective mitigation, any scheme for neutralising nitrogen must be certain at the time of appropriate assessment so that no reasonable scientific doubt remains as to the effects of the development on the international sites. This will need consideration of the delivery of mitigation, its enforceability and the need for securing the adopted measures for the duration of the development's effects, generally 80-125 years.

The supporting Planning Statement (Turley, October 2020) for the current Change of Use application with regards to the Community Park outlines: *“Following implementation of the planning permission, the land can either be transferred to the Council at an appropriate sum to cover the maintenance and management of the park for a specified period of time can be provided by the applicant, or the park can be privately managed.”*

It is Natural England's advice that control and management of the land is transferred to the local authority to ensure the long-term management of this land as public open space (with no fertiliser inputs, collection of dog waste etc.) and to ensure the principle of such mitigation will be upheld following the 80-125 year period, i.e. over the lifetime of the development. Ideally the favourable management of Great Beamond Coppice Site of Importance for Nature Conservation (SINC) should also be included as

part of a wider ecological enhancement strategy (see more on this below). Alternatively the land could be transferred to another suitable third party (such as the local Wildlife Trust, Hampshire County Council, The Land Trust etc.).

Where the mitigation land is to remain within private control, or be transferred to a third party other than the local authority, the application will need to be supported by a detailed long-term management and monitoring plan, to be agreed with the local authority, that sets out how the land will be managed and monitored, in perpetuity, to keep at the 5kgTN rate. Details of how it will be funded should also be provided. Legal step-in powers are likely to be needed for the local authority, again details of appropriate funding for this are likely to be required. Where a resident charge is proposed to fund a private management company, legally robust financial arrangements will be required to ensure payments are ring fenced for the purpose of delivering the agreed management and monitoring plans; robust financial arrangements are likely to be needed to avoid any problems with claiming monies or shortfalls in payments etc.

- Remaining budget

The Planning Statement outlines the intention for the development's remaining budget to be offset via the purchase of 'nitrogen credits' for the Warnford planting scheme, and that the details with regards to the 'precise location of the parcel of land that will be allocated to this scheme ...will be detailed within the s106'. Provided you as competent authority are confident this aspect can be appropriately legally secured, Natural England would have no concerns over this aspect of the proposed nutrient mitigation approach.

Recreational Disturbance – Solent Special Protection Areas (SPAs)

This application is within 5.6km of Solent and Southampton Water SPA and will lead to a net increase in residential accommodation. Natural England is aware that Fareham Borough Council have adopted planning policy to mitigate against adverse effects from recreational disturbance on the Solent SPA sites, as agreed by the Solent Recreation Mitigation Partnership (SRMP), also known as Bird Aware Solent.

Provided that the applicant is complying with the policy and the Bird Aware Definitive Strategy, Natural England are satisfied that the applicant has mitigated against the potential adverse effects of the development on the integrity of the European site(s), and **has no objection** to this aspect of the application.

Please note, your authority's appropriate assessment should reflect the current developer contribution rates, which are updated every April in line with the Retail Price Index.

Ancient woodland and Site of Importance for Nature Conservation (SINC)

The area identified for conversion to Community Park includes the Great Beamond Coppice SINC, which also shows as ancient replanted woodland on the Natural England Ancient Woodland Inventory. Natural England supports the concept of a Community Park to the south of the developable area.

The supporting Ecological Assessment (Ecology Solutions, Sept 2020) outlines measures including a natural buffer planted up with thorny and dense species, and the potential to erect fencing to deter recreational users of the woodland from the development. However due to the scale of the housing, it is considered this SINC ancient woodland is likely to suffer detrimental impacts without further measures. Recreational impacts on woodland can include loss of ground flora, soil compaction, enrichment from dog waste, disturbance to species, cat predation etc. Natural England have concerns that this may lead to long term adverse impacts.

It is our view that the applicant seeks to incorporate Great Beamond Coppice into the Community Park to be managed for nature conservation by an appropriate management body, preferably the local authority (see above advice), to ensure its favourable long-term management to ensure no adverse impacts to the ancient woodland, and that the nature conservation interests of Great Beamond Coppice are managed and enhanced for biodiversity net gain.

It is advised a long-term management and monitoring plan for the Park is developed that outlines how the SINC itself will be positively managed along with the incorporation of further avoidance/mitigation measures designed in line with Natural England standing advice on [ancient woodland, ancient trees and veteran trees](#) and [protected species](#). It is recommended such measures include larger buffers above the 15m minimum (which is advised with specific regards to the root protection zone) and further woodland and scrub planting that improves ecological connectivity between the SINC and its environs and to mitigate some of the recreational pressures. Details should be provided with regards to which management body will deliver such a plan, a long-term monitoring strategy and appropriate level of funding to ensure the effective long-term delivery of such measures.

We advise that these issues are considered further. Natural England will be happy to provide further advice on this aspect through our [Discretionary Advice Service](#).

If you have any queries please let me know.

Many thanks,
Becky

Becky Aziz
Sustainable Development Lead Advisor
Thames Solent Area Team
Natural England

Tel: 020 8026 0064

www.gov.uk/natural-england



During the current coronavirus situation, Natural England staff are working remotely to provide our services and support our customers and stakeholders. All offices and our Mail Hub are closed, so please send any documents by email or contact us by phone or email to let us know how we can help you. See the latest news on the coronavirus at <http://www.gov.uk/coronavirus> and Natural England's regularly updated operational update at <https://www.gov.uk/government/news/operational-update-covid-19>.

APPENDIX 4

Copy of Natural England email dated 26th March
2021

From: Forster, Joseph <Joseph.Forster@naturalengland.org.uk>
Sent: 26 March 2021 09:32
To: Karl Goodbun
Cc: Jodie Dixon; rwright@fareham.gov.uk
Subject: RE: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning Karl,

Apologies for not being clearer on this.

We would want to see the plan developed and submitted to Fareham Borough Council, agreed with the Council Ecologist, then secured by planning condition.

As is our precautionary approach, Natural England is ensuring that the ancient woodland / priority habitats across the board are suitably managed and protected.

I hope this helps,

Joe

From: Karl Goodbun <Karl.Goodbun@ecologysolutions.co.uk>
Sent: 25 March 2021 23:12
To: Forster, Joseph <Joseph.Forster@naturalengland.org.uk>
Cc: Jodie Dixon <Jodie.Dixon@ecologysolutions.co.uk>; rwright@fareham.gov.uk
Subject: RE: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Hi Joe

Many thanks for your email and for the swift turn around. I am glad you found the additional information helpful and it is reassuring to know that the concerns expressed previously have been addressed.

I think we all agree that a Management and Monitoring plan is required and your suggested scope is sensible.

I just want to make sure that I fully understand your last sentence. You state:

“Such a plan should be agreed with a Council’s ecologist, which can then be appropriately secured by planning condition; in such a case we would have no further concerns over this aspect.”

I have assumed that you are saying the production of the plan can be conditioned and should be agreed with the Council’s ecologist, and that as long as such a condition is imposed you have no further concerns on this aspect (Ancient Woodland matters). That would be consistent with the advice / approach taken in relation to the previously consented scheme associated with the site, so I think that is perfectly acceptable in this instance.

If you could confirm I have read this correctly, that would be appreciated.

Many thanks

Kind regards

Karl Goodbun BSc (Hons) MCIEEM | Director



+44 (0) 1451 870767 | +44 (0) 7827 279775
karl.goodbun@ecologysolutions.co.uk

Hertfordshire | +44 (0) 1763 848084 | east@ecologysolutions.co.uk
Manchester | +44 (0) 161 4703232 | mcr@ecologysolutions.co.uk
www.ecologysolutions.co.uk

The ES Group now offers additional services through [ES Landscape Planning](#) and [ES Mitigation & Management](#).

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From: Forster, Joseph <Joseph.Forster@naturalengland.org.uk>
Sent: 25 March 2021 16:51
To: Karl Goodbun <Karl.Goodbun@ecologysolutions.co.uk>
Cc: Jodie Dixon <Jodie.Dixon@ecologysolutions.co.uk>; rwright@fareham.gov.uk
Subject: RE: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Hello Karl,

I appreciate you setting out the key points for me.

Natural England welcome the proposals for transfer of the community park and woodland to FBC, the proposals for woodland and scrub planting in order to improve connectivity between the SINC and other woodland and also the removal of the footpath through the Coppice.

We would advise that a Woodland Management and Monitoring Plan (either separate, or forming part of a wider community park management plan) is developed that details:

- The management measures for the woodland
- How it will be monitored
- How remedial measures/management changes will take place where monitoring shows damage to the woodland
- An appropriate level of funding for the strategy

Such a plan should be agreed with a Council's ecologist, which can then be appropriately secured by planning condition; in such a case we would have no further concerns over this aspect.

Kind regards,

Joe

Joseph Forster
Sustainable Development Advisor
Thames Solent Team | Natural England

www.gov.uk/natural-england

From: Karl Goodbun <Karl.Goodbun@ecologysolutions.co.uk>
Sent: 22 March 2021 23:57
To: Forster, Joseph <Joseph.Forster@naturalengland.org.uk>
Cc: Jodie Dixon <Jodie.Dixon@ecologysolutions.co.uk>
Subject: RE: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Hi Joseph

Many thanks for your offer of assistance. I think it would be helpful to discuss matters, but I have set out the key points below, which relate to potential implications for the Ancient Woodland on site.

Firstly, given comments raised by Hampshire County Council (HCC), acting in an advisory capacity to Fareham Borough Council (FBC), it was agreed that an element of additional survey and assessment work would be undertaken in relation to potential impacts on Ancient Woodland at the application site. The survey work had a narrow focus, but nonetheless provided a helpful update to the baseline situation. A stand-alone Ancient Woodland Impact Assessment was then produced. A copy is attached. It is my understanding that you will not have seen this.

Turning to the key points raised in Natural England's consultation response of 17th November. It is stated:

"However due to the scale of the housing, it is considered this SINC ancient woodland is likely to suffer detrimental impacts without further measures. Recreational impacts on woodland can include loss of ground flora, soil compaction, enrichment from dog waste, disturbance to species, cat predation etc. Natural England have concerns that this may lead to long term adverse impacts."

The attached report provides additional baseline and assessment information which demonstrates that accessibility within the woodland in question, is tempered due to topography and site conditions.

It is further stated:

"It is our view that the applicant seeks to incorporate Great Beamond Coppice into the Community Park to be managed for nature conservation by an appropriate management body, preferably the local authority (see above advice), to ensure its favourable long-term management to ensure no adverse impacts to the ancient woodland, and that the nature conservation interests of Great Beamond Coppice are managed and enhanced for biodiversity net gain.

It is advised a long-term management and monitoring plan for the Park is developed that outlines how the SINC itself will be positively managed along with the incorporation of further avoidance/mitigation measures designed in line with Natural England standing advice on ancient woodland, ancient trees and veteran trees and protected species. It is recommended such measures include larger buffers above the 15m minimum (which is advised with specific regards to the root protection zone) and further woodland and scrub planting that improves ecological connectivity between the SINC and its environs and to mitigate some of the recreational pressures. Details should be provided with regards to which management body will deliver such a plan, a long-term monitoring strategy and appropriate level of funding to ensure the effective long-term delivery of such measures."

In relation to the above, I can confirm that it is proposed that the Community Park and woodland (including Great Beamond Coppice) would be transferred to Fareham with a financial contribution for management. This would be secured through a section 106 obligation.

It is considered that a long-term management and monitoring plan could be the subject of a suitably worded planning condition (associated with the Community Park application), in common with other similar situations.

Regarding the appropriateness of proposed buffers – the attached report should assist you further. To the south and west Great Beamond Coppice will abut the Community Park, so ‘buffering’ is relevant only in the north of the woodland. As the attached report shows, the situation ‘on the ground’ is such that not only is the minimum 15m buffer achieved, but in real terms this is increased towards the western extent of the northern boundary.

A significant amount of woodland and scrub planting can and will be delivered in order to improve connectivity between the SINC and other woodland. This would form part of the detailed design of the Community Park.

I can also confirm that my client now intends to remove the footpath / cycleway which currently runs through Great Beamond Coppice. This additional measure will reduce the interaction between the public and the woodland. It is hoped that this additional measure is welcomed.

I am looking for confirmation that in the light of the additional information contained within this email and the attached report, Natural England are content that the mitigation package relating to Ancient Woodland is acceptable. As I have stated, I am very happy to discuss this matter if that would be helpful.

Many thanks

Kind regards

Karl Goodbun BSc (Hons) MCIEEM | Director



Ecology Solutions Limited
Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ
+44 (0) 1451 870767 | +44 (0) 7827 279775
karl.goodbun@ecologysolutions.co.uk

Hertfordshire | +44 (0) 1763 848084 | east@ecologysolutions.co.uk
Manchester | +44 (0) 161 4703232 | mcr@ecologysolutions.co.uk
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From: Forster, Joseph <Joseph.Forster@naturalengland.org.uk>
Sent: 22 March 2021 11:02
To: Karl Goodbun <Karl.Goodbun@ecologysolutions.co.uk>
Cc: Jodie Dixon <Jodie.Dixon@ecologysolutions.co.uk>
Subject: FW: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Hello Karl / Jodie,

Just following up again on your queries regarding previous advice, if you could send them over to me I will take a look and provide answers for you.

Many thanks,

Joseph Forster
Sustainable Development Advisor
Thames Solent Team | Natural England

www.gov.uk/natural-england



From: Forster, Joseph
Sent: 15 March 2021 09:25
To: Karl.Goodbun@ecologysolutions.co.uk
Cc: Jodie.Dixon@ecologysolutions.co.uk
Subject: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Hello Karl,

Becky has passed on this query to me as she has moved on in roles. I am fairly busy this week but will try to answer any questions you have if you send them through in an email.

Many thanks,

Joe

Joseph Forster
Sustainable Development Advisor
Thames Solent Team | Natural England

www.gov.uk/natural-england



From: Karl Goodbun <Karl.Goodbun@ecologysolutions.co.uk>
Sent: 11 March 2021 15:55
To: Aziz, Rebecca <Rebecca.Aziz@naturalengland.org.uk>
Cc: Jodie Dixon <Jodie.Dixon@ecologysolutions.co.uk>
Subject: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Hi Becky

I trust you are keeping well.

Back in November last year you provided the attached consultation response in relation to my client's application site at Funtley. I am keen to have a conversation regarding a couple of your points and would be very grateful if you could call me on my mobile number below as soon as you are able. I have been trying the number given in you email footer, but no joy (I just get cut off).

I look forward to speaking with you.

Many thanks

Kind regards

Karl Goodbun BSc (Hons) MCIEEM | Director



Ecology Solutions Limited
Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ
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karl.goodbun@ecologysolutions.co.uk

Hertfordshire | +44 (0) 1763 848084 | east@ecologysolutions.co.uk
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APPENDIX 5

Copy of Natural England Letter dated 2nd September
2021

Date: 02 September 2021
Our ref: 365598
Your ref: P/21/0300/RM



Rachael Hebden
Fareham Borough Council

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

BY EMAIL ONLY

T 0300 060 3900

Dear Rachael

Planning consultation: Reserved Matters (re: P/17/0752/OA) for construction of 78 dwellings (Phase 1) with parking, open space, landscaping and other associated works
Location: Land East of Brook Lane and North of Warsash Road, Warsash

Thank you for your consultation on the above dated 20 August 2021 which was received by Natural England on the same date.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

SUMMARY OF NATURAL ENGLAND'S ADVICE

FURTHER INFORMATION REQUIRED TO DETERMINE IMPACTS ON DESIGNATED SITES

As submitted, the application could have potential significant effects on the New Forest SPA, SAC and Ramsar sites. Natural England requires further information in order to determine the significance of these impacts and the scope for mitigation.

The following information is required:

- An assessment of New Forest recreational impacts with details of suitable mitigation

Without this information, Natural England may need to object to the proposal.

Please re-consult Natural England once this information has been obtained.

Natural England's further advice on designated sites/landscapes and advice on other issues is set out below.

New Forest Recreational Impacts

As recently raised in our response to the Fareham local plan, [recent research and analysis](#) by Footprint Ecology (a national leader in this area of expertise) identified that planned increases in housing around the New Forest designated sites will result in a marked increase in use of the sites and exacerbate recreational impacts. It found that the majority of visitors to the New Forest designated sites on short visits/day trips from home originated from within a 13.8km radius of the site.

This development site falls within the 13.8km zone and we consider it is likely to contribute to recreational impacts on the sites in-combination with other development coming forward across the area. It is advised your authority's appropriate assessment is updated to include an in-combination assessment of the development with other plans/projects either within the authority area or in neighbouring areas. Competent authorities will be aware of recent CJEU decisions regarding the assessment of elements of a proposal aimed toward mitigating adverse effects on designated sites and the need for certainty that mitigating measures will achieve their aims.

The resultant recommendations from the recent research highlight that a package of mitigation measures will resolve the issues presented by housing growth in the area, but this will require a 'strategic, proportionate, and co-ordinated approach, [through] partnership working across a range of local authorities and stakeholders'. Natural England are committed to working with affected local authorities to develop a strategic approach to addressing recreational impacts from new development on the New Forest designated sites.

Until such a strategic approach is adopted it is advised at this time that alternative and appropriate mitigation measures are sought to address impacts on the protected sites. It is considered that a financial contribution, based on a robust and agreed methodology, directed towards measures at the designated sites e.g. via the New Forest National Park Authority's Habitat Mitigation Scheme, is a means that will enable the Authority to deliver site specific mitigation measures on behalf of the applicant. Such an approach would provide a certain and robust means to addressing the effects of recreational disturbance via direct measures at the protected sites. Some detail on how this money will be used as part of the Scheme is advised to ensure you as competent authority can be satisfied the recreational impact from this development will be appropriately addressed and secured in perpetuity. Natural England would be happy to advise further via our Discretionary Advice Service (DAS).

Other advice

For advice on other issues relevant to this application, including recreational disturbance to Solent SPA sites and nitrogen neutrality, please refer to our prior correspondence relating to this planning application.

If you have any queries relating to the advice in this letter please contact me on 07552 268094 or mary.andrew@naturalengland.org.uk.

Further general advice on the protected species and other natural environment issues is provided at Annex A.

Should the applicant wish to discuss the further information required and scope for mitigation with Natural England, we would be happy to provide advice through our [Discretionary Advice Service](#).

Please consult us again once the information requested above, has been provided.

Yours sincerely

Mary Andrew
Sustainable Development Lead Adviser
Natural England- Thames Solent Team

Annex A – Additional Advice

Natural England offers the following additional advice:

Landscape

Paragraph 174 of the National Planning Policy Framework (NPPF) highlights the need to protect and enhance valued landscapes through the planning system. This application may present opportunities to protect and enhance locally valued landscapes, including any local landscape designations. You may want to consider whether any local landscape features or characteristics (such as ponds, woodland or dry stone walls) could be incorporated into the development in order to respect and enhance local landscape character and distinctiveness, in line with any local landscape character assessments. Where the impacts of development are likely to be significant, a Landscape & Visual Impact Assessment should be provided with the proposal to inform decision making. We refer you to the [Landscape Institute Guidelines for Landscape and Visual Impact Assessment](#) for further guidance.

Protected Species

Natural England has produced [standing advice](#)¹ to help planning authorities understand the impact of particular developments on protected species. We advise you to refer to this advice. Natural England will only provide bespoke advice on protected species where they form part of a SSSI or in exceptional circumstances.

Local sites and priority habitats and species

You should consider the impacts of the proposed development on any local wildlife or geodiversity sites, in line with paragraphs 175 and 179 of the NPPF and any relevant development plan policy. There may also be opportunities to enhance local sites and improve their connectivity. Natural England does not hold locally specific information on local sites and recommends further information is obtained from appropriate bodies such as the local records centre, wildlife trust, geoconservation groups or recording societies.

Priority habitats and Species are of particular importance for nature conservation and included in the England Biodiversity List published under section 41 of the Natural Environment and Rural Communities Act 2006. Most priority habitats will be mapped either as Sites of Special Scientific Interest, on the Magic website or as Local Wildlife Sites. List of priority habitats and species can be found [here](#)². Natural England does not routinely hold species data, such data should be collected when impacts on priority habitats or species are considered likely. Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land, further information including links to the open mosaic habitats inventory can be found [here](#).

Environmental enhancement

Development provides opportunities to secure net gains for biodiversity and wider environmental gains, as outlined in the NPPF (paragraphs 8, 73, 104, 120, 174, 175, 179 and 180). We advise you to follow the mitigation hierarchy as set out in paragraph 180 of the NPPF and firstly consider what existing environmental features on and around the site can be retained or enhanced or what new features could be incorporated into the development proposal. Where onsite measures are not possible, you should consider off site measures. Opportunities for enhancement might include:

- Providing a new footpath through the new development to link into existing rights of way.
- Restoring a neglected hedgerow.
- Creating a new pond as an attractive feature on the site.
- Planting trees characteristic to the local area to make a positive contribution to the local landscape.
- Using native plants in landscaping schemes for better nectar and seed sources for bees and birds.
- Incorporating swift boxes or bat boxes into the design of new buildings.

¹ <https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals>

² <http://webarchive.nationalarchives.gov.uk/20140711133551/http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

- Designing lighting to encourage wildlife.
- Adding a green roof to new buildings.

You could also consider how the proposed development can contribute to the wider environment and help implement elements of any Landscape, Green Infrastructure or Biodiversity Strategy in place in your area. For example:

- Links to existing greenspace and/or opportunities to enhance and improve access.
- Identifying opportunities for new greenspace and managing existing (and new) public spaces to be more wildlife friendly (e.g. by sowing wild flower strips)
- Planting additional street trees.
- Identifying any improvements to the existing public right of way network or using the opportunity of new development to extend the network to create missing links.
- Restoring neglected environmental features (e.g. coppicing a prominent hedge that is in poor condition or clearing away an eyesore).

Access and Recreation

Natural England encourages any proposal to incorporate measures to help improve people's access to the natural environment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways should be considered. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Relevant aspects of local authority green infrastructure strategies should be delivered where appropriate.

Rights of Way, Access land, Coastal access and National Trails

Paragraphs 100 and 174 of the NPPF highlights the important of public rights of way and access. Development should consider potential impacts on access land, common land, rights of way and coastal access routes in the vicinity of the development. Consideration should also be given to the potential impacts on the any nearby National Trails. The National Trails website www.nationaltrail.co.uk provides information including contact details for the National Trail Officer. Appropriate mitigation measures should be incorporated for any adverse impacts.

Biodiversity duty

Your authority has a [duty](#) to have regard to conserving biodiversity as part of your decision making. Conserving biodiversity can also include restoration or enhancement to a population or habitat. Further information is available [here](#).

APPENDIX 6

Copy of Natural England email dated 12th November
2021

From: Andrew, Mary <Mary.Andrew@naturalengland.org.uk>
Sent: 12 November 2021 09:44
To: Karl Goodbun
Subject: RE: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Categories: Filed by Jodie

Dear Karl,

Thank you for your email regarding recreational disturbance impacts to the New Forest Designated sites. I now cover the Fareham Borough Council area so Joe has forwarded your email on to me.

The Zone of Influence report (available [here](#), which you may already have seen) defines a 13.8km buffer zone, as the crow flies, around the New Forest Designated sites (this is 13.79km rounded to 13.8km). Mitigation to address recreational impacts to the New Forest Designated sites is needed within this zone. There is also a 13.8-15km zone where large (EIA) developments should screen in the issue into an HRA and consider this on a case by case basis.

The location of planning application P/20/1168/OA (at 455853,108299) does appear to be just inside this 13.8km buffer zone.

Please refer to the New Forest NPA website for the Footprint Ecology reports ([here](#)), the recommendations of which we broadly support as based on latest evidence. It also includes advice that relates to Fareham and its inclusion within the zone of influence. Although Footprint Ecology have recommended that Fareham is excluded from the zone of influence, it is NE's advice that the 13.8km buffer should be applied under the precautionary approach due to postcode data that highlights uncertainty as regards to the level of impact from Fareham.

We are working with individual local planning authorities to develop suitable interim approaches (some are more progressed than others) while more strategic partnership work continues among the affected LPAs and NE together to develop a cross-boundary consistent approach for the long term.

For individual applications that are affected we suggest applicants liaise closely with the LPA to ensure suitable mitigation is provided. Mitigation can include provision of greenspace that can act to divert visitors from the designated sites, e.g. provision of Suitable Alternative Natural Greenspace (SANG) (this is applicable to larger developments), contribution to strategic SANG (liaise with LPA where this option is available); measures to 'upgrade' existing public open space close to the development may also be considered. Contributions will be required towards measures at the designated sites (e.g. access management, education and comms, monitoring) to address and monitor residual impacts.

While open greenspace is welcomed, some level of contribution towards the designated sites within the New Forest would also be needed to address residual recreational impacts. We advise that you contact the LPA in the first instance to agree a suitable rate and to discuss their developing strategic mitigation approach.

Natural England can advise via the statutory consultation route or through our chargeable [DAS](#) service, but please note we are pausing much of the DAS work until Spring 2022 due to resourcing/workload issues.

I hope that this provides some clarity for your applications moving forwards.

Best wishes,

Mary Andrew
Sustainable Development Lead Adviser
Thames Solent Team
Natural England
4th Floor, Eastleigh House, Upper Market St, Eastleigh, SO50 9YN
Mobile: 07552 268094

<http://www.gov.uk/natural-england>

From: Karl Goodbun <Karl.Goodbun@ecologysolutions.co.uk>
Sent: 04 November 2021 12:30
To: Forster, Joseph <Joseph.Forster@naturalengland.org.uk>
Cc: Jodie Dixon <Jodie.Dixon@ecologysolutions.co.uk>; Aziz, Rebecca <Rebecca.Aziz@naturalengland.org.uk>
Subject: P/20/1168/OA & P/20/1166/CU - Land To The South Of Funtley Road, Funtley, Fareham

Dear Joe

You may recall that we liaised regarding the above scheme back in March of this year when we were dealing with matters concerning Ancient Woodland. Those matters were satisfactorily resolved, but I am now advising my client in relation to another potential hurdle for the scheme – implications for the New Forest SAC / SPA in respect of new housing.

It is my understanding that a 13.8km blanket buffer is now being applied in relation to the SPA / SAC and that NE are starting to object to schemes in Fareham on the basis of potential impacts on the SPA / SAC. This is an incredibly frustrating situation, particularly since the Footprint Ecology evidence base on visitor impacts (obtained via the Test Valley BC website) very clearly makes the case that the zone of influence should be modified to exclude Fareham (and other areas) to take into account the particular geographic barrier of Southampton Water and the Solent.

By our calculations, the P/20/1168/OA & P/20/1166/CU scheme lies 13.5km from the SPA / SAC (straight line and closest point - edge of development).

At this stage I would be grateful for your confirmation on the following:

1. NEs position on whether this development is in fact within a purported zone of influence and what precisely that zone of influence is deemed to be;
2. On what evidence base is NE relying in setting the zone of influence;
3. In the event that mitigation / avoidance measures are considered necessary, please confirm that my client can place reliance upon the significant open space which will be delivered through the Community Park (i.e. offer up and agree a bespoke solution).

I suspect that we may need to liaise further on this matter in due course, but I would be very grateful for a response on the above as a matter of some urgency please.

Many thanks

Kind regards

Karl Goodbun BSc (Hons) MCIEEM | Director

Ecology Solutions Limited
Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ
+44 (0) 1451 870767 | +44 (0) 7827 279775
karl.goodbun@ecologysolutions.co.uk

Hertfordshire | +44 (0) 1763 848084 | east@ecologysolutions.co.uk
Manchester | +44 (0) 161 4703232 | mcr@ecologysolutions.co.uk
www.ecologysolutions.co.uk

APPENDIX 7

Extract from letter from FBC to PINS pursuant to the
Examination of the Local Plan 2037, dated 3rd
December 2021

FAREHAM

BOROUGH COUNCIL

Ms Helen Hockenhull
Planning Inspectorate
Sent via email

Head of Planning Strategy and
Economic Development
Gayle Wootton

Contact: Gayle Wootton

Ext.: 4328

Date: 3 December 2021

Dear Ms Hockenhull

Examination of the Fareham Local Plan 2037

The Council was grateful to receive your initial questions and requests sent out in your letter of 17 November 2021. We are pleased to be able to respond fully and positively to the questions and have set out our answers below.

For clarity, your letter of 17th November and this response has been added to the examination website with references INSP001 (Inspector's Initial Questions Letter) and FBC001 (Council's response to Initial Questions) respectively. Any additional evidence documents have been added to the Examination Library under Post Submission Council Documents, and are referenced accordingly in this letter.

Legal compliance

- 1. I note from the Council's submission letter that it is intended to review the Statement of Community Involvement in early 2022. The Planning Practice Guidance (PPG) encourages authorities to update their SCIs where they are inconsistent with the latest COVID 19 guidance. Why did the Council consider this was not necessary? What steps did the Council take to ensure that sections of the community without access to the internet could engage in the examination process?**

The Statement of Community Involvement (SCI) was adopted in March 2017. Planning Practice Guidance states that the SCI should be reviewed every 5 years from adoption date. This would require the review of Fareham's SCI to take place by March 2022. Due to the changes in legislation and housing number requirement the Council has encountered, the preparation of the Fareham Local Plan 2037 has been a longer process than predicted and to ensure consistency regarding consultation throughout each stage of the process, the Council has continued to work using the existing SCI. With submission of the Local Plan to the Planning Inspectorate taking place in September 2021, it is anticipated that the Local Plan examination will take place in the Winter/Spring of 2021/22. The Council have already confirmed its

Planning & Regeneration
Civic Offices Civic Way Fareham PO16 7AZ
Tel: 01329 236100
Voicemail: 01329 824630 gwootton@fareham.gov.uk
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- 6. Recreational Impacts on the New Forest: The Statement of Common Ground (SoCG) with Natural England (SG006) discusses the need for a strategic cross boundary strategy to tackle the impact of recreational disturbance on the New Forest SAC/SPA/RAMSAR. I note that the Council has joined the project steering group to work with other affected authorities. In the meantime, until this has been agreed, Natural England suggest an interim mitigation strategy be prepared. What progress has been made with this? Has a programme of work and timetable been set out?**

The Council has published an Interim Mitigation Scheme to provide mitigation for recreational disturbance impacts generated by new residential development within the 13.8km Zone of Influence within Fareham Borough. The Interim Scheme has been produced in consultation with and approved by Natural England. The Interim Mitigation Scheme will be presented at a meeting of the Council's Executive on 7th December 2021 for approval. Subject to that decision, the Planning Committee will be advised of the mitigation approach to be considered as a material planning consideration in their determination of planning applications which will enable the Local Planning Authority to secure appropriate mitigation.

The Interim Mitigation Scheme can be submitted to the Council's examination library once approved.

Housing needs

- 7. Paragraph 4.2 of the plan indicates that the housing need figure using the standard methodology is 541 dwellings per annum. Please point me to where in the evidence base this calculation is set out.**

Paragraph 4.2 of the plan ([CD001 Revised Publication Local Plan](#)) confirms that the housing requirement has been calculated using the standard methodology using 2014-based household projections in combination with affordability data released in March 2021. The calculation is not set out in the evidence base as it follows the PPG exactly, however if it is helpful for the Inspector, the calculation is set out below.

Consistent with the methodology, the baseline was set using national household growth projections (2014-based household projections) for the local authority area using a base date of 2021. Using these projections, the average annual household growth over a 10-year period was calculated. The projections show an anticipated household growth from 50,729 households in 2021 to 54,584 in 2031 with an average annual growth rate of 386 homes.

The next step was to adjust the average annual projected household growth figure based on the affordability of the area in order to ensure that the local housing need responds to price signals and is consistent with the policy objective of significantly boosting the supply of homes. In accordance with the PPG the most recent median workplace-based affordability ratios, published by the Office for National Statistics, were used. The 2020 data (published in March 2021) shows a median house price of £299,950 and median workplace earnings of £28,734 giving an affordability ratio of 10.44. The adjustment to be made follows the following formula:

APPENDIX 8

Email correspondence relating to engagement with
Natural England on the sHRA

From: Karl Goodbun
Sent: 04 January 2022 14:36
To: Andrew, Mary
Cc: ALISON.DYSON@planninginspectorate.gov.uk; Jodie Dixon; Aaron Wright
Subject: RE: P/20/1168/OA & P/20/1166/CU - 7601. Land To The South Of Funtley Road, Funtley, Fareham
Attachments: 3283643 & 3284532 Note of Case Management Conference final.pdf

Dear Mary

Thank you for your email of 20th December which has been forwarded to me today.

In the light of your responses since submission of the sHRA and summary document, unfortunately DAS is still not an option given the timescales for the Inquiry. However, to re-emphasise, this is a matter on which the Planning Inspector has specifically requested Natural England's view.

To assist further on this point, I attach the Case Management Conference Note and draw attention to paragraph 45 which states:

“The appellant will prepare a ‘shadow’ Appropriate Assessment in relation to Habitats Sites. **The main parties will engage with Natural England** with a view to getting their response on likely significant effects on Solent Marine and New Forest Habitats Sites and any proposed mitigation. The main parties felt it very unlikely that Natural England could be involved to such a degree that a three way SoCG on these matters would be possible which is understandable. A clear joint statement from the main parties, either as part of the SoCG or separately, **including Natural England's responses, will be necessary.**”

[emphasis added]

You will note that I have also copied Alison Dyson of PINS directly into this email in case there remains any ambiguity as to whether the Inspector is seeking Natural England's view on the assessment / proposed mitigation.

Whilst I do appreciate Natural England's capacity issues, it is clearly very important for the Inspector to understand NE's position, and given the issues involved and the way in which mitigation is to be dealt with, I trust it will in fact prove to be a comparatively straight forward process of review.

I would be very grateful for a response at your earliest convenience and as ever, I am happy to discuss the matter.

Many thanks

Kind regards

Karl Goodbun BSc (Hons) MCIEEM | Director



Ecology Solutions Limited
Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ
+44 (0) 1451 870767 | +44 (0) 7827 279775
karl.goodbun@ecologysolutions.co.uk

Hertfordshire | +44 (0) 1763 848084 | east@ecologysolutions.co.uk
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The ES Group now offers additional services through [ES Landscape Planning](#) and [ES Mitigation & Management](#).

Following Government advice, the ES Group has implemented policies to safeguard staff, clients and the public during the coronavirus / Covid-19 pandemic, while continuing to carry out our work. Staff are working from home

– diverts are in place so calls to office numbers will still be answered. We are continuing to undertake all field work (where sites remain open), maintaining social distancing (travelling to sites alone) and personal hygiene.

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From: Andrew, Mary <Mary.Andrew@naturalengland.org.uk>
Sent: 20 December 2021 15:07
To: Jodie Dixon <Jodie.Dixon@ecologysolutions.co.uk>
Subject: RE: P/20/1168/OA & P/20/1166/CU - 7601. Land To The South Of Funtley Road, Funtley, Fareham

Dear Jodie,

Thank you for your email below and attached documents relating to the appeal site at Land to the south of Funtley Road. As this is not a statutory consultation request, I would request that you apply for our [discretionary advice service](#) (DAS) for detailed comments on these documents. This operates on a cost recovery basis. If you wish to seek our advice through DAS please complete and return the [charged advice request form](#). The completed form should be sent to consultations@naturalengland.org.uk.

Alternatively, Natural England would provide advice on this appeal via the statutory route, for instance responding to consultations from the Local Planning Authority or from the Planning Inspector.

As previously advised, I'm afraid that due to competing priorities and limited capacity we are unable to offer immediate advice on DAS requests. At this time, we are anticipating being able to start accepting new DAS work in February 2022. I apologise for the delay. If you do still wish to seek DAS advice, we will of course keep you up to date regarding any changes to our capacity.

I hope this is helpful and please get in touch if anything is unclear.

Kind regards,

Mary Andrew
Sustainable Development Lead Adviser
Thames Solent Team
Natural England
4th Floor, Eastleigh House, Upper Market St, Eastleigh, SO50 9YN
Mobile: 07552 268094

<http://www.gov.uk/natural-england>

Thriving Nature
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From: Jodie Dixon <Jodie.Dixon@ecologysolutions.co.uk>
Sent: 16 December 2021 17:08
To: Andrew, Mary <Mary.Andrew@naturalengland.org.uk>
Cc: Karl Goodbun <Karl.Goodbun@ecologysolutions.co.uk>
Subject: P/20/1168/OA & P/20/1166/CU - 7601. Land To The South Of Funtley Road, Funtley, Fareham

Hi Mary

You will hopefully recall our email exchange regarding the above site and the issue on mitigation required in respect of the New Forest Habitats Sites. We have taken on board your comments and have put forward what we consider to be appropriate mitigation.

By way of background the relevant applications are the subject of Appeal on the grounds of non-determination, with the Inquiry set for February 2022. Insofar as Ecology is concerned the only deemed RfRs relate to the securing of appropriate mitigation (via legal obligations) for Nitrates and recreational disturbance at the Solent Habitats Sites. Fareham Borough Council are content that a signed s106 will deal with these issues, also noting that a contract is in place to purchase off site Nitrate Credits.

Regarding the New Forest, as you may be aware Fareham Borough Council now have an Interim Mitigation Solution with payments to be secured on a per unit basis, via legal obligation. My client will pay into that scheme, and in addition further comfort can be taken from the fact that the proposals deliver a large community park providing alternative recreation on the door step of new residents.

I have attached a copy of our full sHRA, with the Annexes available through the link below. Also attached is a sHRA Summary and Conclusions document.

I would be grateful if you could confirm that subject to the securing of the proposed measures, Natural England is content that no adverse on the integrity of any Habitats Site arises.

You have previously stated that DAS is not an option until the spring of next year. Since this scheme is the subject of Appeal and since the Inspector has specifically stated that he wants to understand Natural England’s position on such matters, I trust that you will be able to comment fairly swiftly. I have tried to assist by preparing the summary document.

Due to the file size please see below a ‘We Transfer’ link to the Plan & Annexes for the sHRA:
<https://we.tl/t-kjP94M7j2K>

I am available to discuss if you have any questions

Many thanks

Kind regards

Karl

**Dictated by and sent on behalf of Karl Goodbun by
Jodie Dixon | PA to Dominic Farmer, Karl Goodbun and Simon Taber**



Ecology Solutions Limited
Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ
+44 (0) 1451 870767
jodie.dixon@ecologysolutions.co.uk

Hertfordshire | +44 (0) 1763 848084 | east@ecologysolutions.co.uk
Manchester | +44 (0) 161 4703232 | mcr@ecologysolutions.co.uk
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The ES Group now offers additional services through [ES Landscape Planning](#) and [ES Mitigation & Management](#).

Please note that our offices will close for Christmas at 5pm on Friday 17th December and re-open in the New Year at 9am on Tuesday 4th January.

Following Government advice, the ES Group has implemented policies to safeguard staff, clients and the public during the coronavirus / Covid-19 pandemic, while continuing to carry out our work. Staff are working from home – divers are in place so calls to office numbers will still be answered. We are continuing to undertake all field work, maintaining social distancing (travelling to sites alone) and personal hygiene.

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APPENDIX 9

Copies of BNG calculations

Funtley South

Headline Results

Return to results menu

On-site baseline	<i>Habitat units</i>	73.68
	<i>Hedgerow units</i>	19.67
	<i>River units</i>	0.00
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	99.33
	<i>Hedgerow units</i>	18.53
	<i>River units</i>	0.00
On-site net % change <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	34.81%
	<i>Hedgerow units</i>	-5.80%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	25.65
	<i>Hedgerow units</i>	-1.14
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	34.81%
	<i>Hedgerow units</i>	-5.80%
	<i>River units</i>	0.00%
Trading rules Satisfied?	Yes	

Broad Habitat	Proposed habitat	Area (hectare)	Disturbance		Condition		Strategic significance			Temporal multiplier			Difficulty multipliers			Habitat units delivered	Comments							
			Disturbance	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier	Standard time to target condition/years	Habitat created in advance/years	Delay in starting habitat creation/years	Standard or adjusted time to target condition	Final time to target condition/years	Final time to target multiplier		Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied	Assessor comments	Reviewer comments		
																							Area/compensation not in local strategy/ no local strategy	Low Strategic Significance
Urban	Developed land; sealed surface	1.06	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0		Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00	Buildings				
Urban	Vegetated garden	1.41	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1		Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	2.72	Gardens				
Urban	Developed land; sealed surface	1.49	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0		Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00	Hardstanding				
Urban	Developed land; sealed surface	0.04	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0		Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00	LEAP				
Urban	Vacant/derelict land/ bareground	0.08	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1		Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	0.15	Path				
Grassland	Other neutral grassland	1.66	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5		Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	11.11	Created grassland around development				
Grassland	Other neutral grassland	0.47	Medium	4	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	10		Standard time to target condition applied	10	0.700	Low	Standard difficulty applied	Low	1	3.95	Intended to be created within community park				
Grassland	Other neutral grassland	0.31	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5		Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	2.08	Created grassland around development				
Woodland and forest	Other woodland; broadleaved	0.05	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	15		Standard time to target condition applied	15	0.586	Low	Standard difficulty applied	Low	1	0.23	Woodland created within retained and enhanced woodland to east of the site				
Woodland and forest	Other woodland; broadleaved	2.18	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	15		Standard time to target condition applied	15	0.586	Low	Standard difficulty applied	Low	1	10.22	Woodland created within community park				
Urban	Sustainable urban drainage feature	0.15	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	3		Standard time to target condition applied	3	0.899	Medium	Standard difficulty applied	Medium	0.67	0.36	SUDS features				
Total area		8.90																					Total Units	80.83

B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Baseline ref	UK Habitats - existing habitats			Habitat distinctiveness		Habitat condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline Total hedgerow units	Retention category biodiversity value						Comments	
	Hedge number	Hedgerow type	Length KM	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier			Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
1	1	Hedge Ornamental Non Native	0.07	V Low	1	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.07			0.00	0.00	0.07	0.07		
2	2	Native Hedgerow	0.46	Low	2	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	2.76		0.46	0.00	2.76	0.00	0.00		
3	3	Native Hedgerow	0.14	Low	2	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.84		0.14	0.00	0.84	0.00	0.00		
4	4	Native Species Rich Hedgerow	0.09	Medium	4	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	1.08	0.09		1.08	0.00	0.00	0.00		
5	5	Native Species Rich Hedgerow with trees	0.35	High	6	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	6.30	0.35		6.30	0.00	0.00	0.00		
6	6	Native Species Rich Hedgerow with trees	0.31	High	6	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	5.58	0.06		1.08	0.00	0.25	4.50		
7	7	Native Species Rich Hedgerow with trees	0.08	High	6	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.96		0.08	0.00	0.96	0.00	0.00		
8	TL1	Line of Trees (Ecologically Valuable)	0.09	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.72	0.09		0.72	0.00	0.00	0.00		
9	TL2	Line of Trees (Ecologically Valuable)	0.07	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.56	0.07		0.56	0.00	0.00	0.00		
10	TL3	Line of Trees (Ecologically Valuable)	0.1	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.80	0.1		0.80	0.00	0.00	0.00		
11																				
12																				
13																				
14																				
15			1.76									19.67	0.78	0.68	10.54	4.56	0.32	4.57		

Hedge ID	Hedge Label	Length (ft)	Baseline Habitat					Baseline condition score	Baseline strategic alignment energy	Baseline strategic alignment score	Baseline habitat value	Suggested action	Proposed (Pre-Approved but not in spreadsheet)	Change in disturbance and condition		Length (ft)	Disturbance		Condition		Fuel development / fuel intervention habitat				Temporal multiplier				Disturbance risk multiplier				Comments			
			Disturbance level	Disturbance score	Condition category	Condition score	Strategic alignment							Disturbance movement	Condition movement		Disturbance	Score	Condition	Score	Strategic alignment	Strategic alignment	Strategic position multiplier	Standard Time to target condition/years	Actual achieved in advance/years	Delay in starting habitat enhancement/years	Standard or adjusted time to target condition	Final time to target condition/years	Final Time to target multiplier	Standard difficulty of achievement	Applied difficulty multiplier	Final difficulty of achievement	Difficulty multiplier applied	Hedge value Gained	Assessor comments	Reviewer comments
			Low	Medium	High	Low	Medium							High	Low		Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
1	State Hedge	0.40	Low	2	Good	5	Low Strategic Alignment	1	0.01	Low Disturbance	Less Disturbance based on better	State Opened Back Hedge	Low - Medium	Lower Disturbance Habitat - Good	0.40	Medium	4	Good	5	Low Strategic Alignment	1	0	Standard Time to target condition/years	Standard achieved in advance/years	Delay in starting habitat enhancement/years	Standard or adjusted time to target condition	Final time to target condition/years	Final Time to target multiplier	Standard difficulty of achievement	Applied difficulty multiplier	Final difficulty of achievement	Difficulty multiplier applied	Hedge value Gained	Assessor comments	Reviewer comments	
2	State Hedge	0.14	Low	0	Good	5	Low Strategic Alignment	1	0.04	Low Disturbance	Less Disturbance based on better	State Opened Back Hedge	Low - Medium	Lower Disturbance Habitat - Good	0.14	Medium	4	Good	5	Low Strategic Alignment	1	0	Standard Time to target condition/years	Standard achieved in advance/years	Delay in starting habitat enhancement/years	Standard or adjusted time to target condition	Final time to target condition/years	Final Time to target multiplier	Standard difficulty of achievement	Applied difficulty multiplier	Final difficulty of achievement	Difficulty multiplier applied	Hedge value Gained	Assessor comments	Reviewer comments	
3	State Opened Back Hedge with trees	0.28	High	0	Medium	2	High Strategic Alignment	1	0.02	High Disturbance	Less Disturbance based on better	State Opened Back Hedge with trees	High - High	Medium - Good	0.28	High	0	Good	5	High Strategic Alignment	1	0	Standard Time to target condition/years	Standard achieved in advance/years	Delay in starting habitat enhancement/years	Standard or adjusted time to target condition	Final time to target condition/years	Final Time to target multiplier	Standard difficulty of achievement	Applied difficulty multiplier	Final difficulty of achievement	Difficulty multiplier applied	Hedge value Gained	Assessor comments	Reviewer comments	
													0.88																		1.88					

Funtley South

Headline Results

Return to results menu

On-site baseline	<i>Habitat units</i>	73.68
	<i>Hedgerow units</i>	19.67
	<i>River units</i>	0.00
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	91.24
	<i>Hedgerow units</i>	18.53
	<i>River units</i>	0.00
On-site net % change <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	23.83%
	<i>Hedgerow units</i>	-5.80%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	17.56
	<i>Hedgerow units</i>	-1.14
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	23.83%
	<i>Hedgerow units</i>	-5.80%
	<i>River units</i>	0.00%
Trading rules Satisfied?	No - Check Trading Summary	

B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Baseline ref	UK Habitats - existing habitats			Habitat distinctiveness		Habitat condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline Total hedgerow units	Retention category biodiversity value						Comments	
	Hedge number	Hedgerow type	Length KM	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier			Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
1	1	Hedge Ornamental Non Native	0.07	V Low	1	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.07			0.00	0.00	0.07	0.07		
2	2	Native Hedgerow	0.46	Low	2	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	2.76		0.46	0.00	2.76	0.00	0.00		
3	3	Native Hedgerow	0.14	Low	2	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.84		0.14	0.00	0.84	0.00	0.00		
4	4	Native Species Rich Hedgerow	0.09	Medium	4	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	1.08	0.09		1.08	0.00	0.00	0.00		
5	5	Native Species Rich Hedgerow with trees	0.35	High	6	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	6.30	0.35		6.30	0.00	0.00	0.00		
6	6	Native Species Rich Hedgerow with trees	0.31	High	6	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	5.58	0.06		1.08	0.00	0.25	4.50		
7	7	Native Species Rich Hedgerow with trees	0.08	High	6	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.96		0.08	0.00	0.96	0.00	0.00		
8	TL1	Line of Trees (Ecologically Valuable)	0.09	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.72	0.09		0.72	0.00	0.00	0.00		
9	TL2	Line of Trees (Ecologically Valuable)	0.07	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.56	0.07		0.56	0.00	0.00	0.00		
10	TL3	Line of Trees (Ecologically Valuable)	0.1	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.80	0.1		0.80	0.00	0.00	0.00		
11																				
12																				
13																				
14																				
15																				
			1.76									19.67		0.78	0.68	10.54	4.56	0.32	4.57	

Issue ID	Issue Title	Length (ft)	Baseline Status					Baseline condition score	Baseline strategic alignment score	Baseline habitat value	Suggested action	Proposed (Pre-Approved but not in construction)	Change in disturbance and condition		Length (ft)	Disturbance		Condition		Fuel development / fuel intervention habitat				Temporal multiplier				Disturbance risk multiplier				Comments			
			Baseline disturbance level	Baseline disturbance score	Baseline condition category	Baseline strategic alignment category	Baseline strategic alignment score						Disturbance movement	Condition movement		Disturbance	Score	Condition	Score	Strategic alignment	Strategic alignment	Strategic position multiplier	Resilient Time to target condition/years	Habit enhanced in acres/years	Delay in starting habitat enhancement/years	Resilient or adjusted time to target condition	Final time to target condition/years	Final Time to target multiplier	Standard difficulty of achievement	Applied difficulty multiplier	Final difficulty of achievement	Difficulty multiplier applied	Hedge value Gained	Assessor comments	Reviewer comments
			Low	Medium	High	Low	Medium						High	Low		Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
1	State Hedge	0.40	Low	2	Good	5	Low Strategic Alignment	1	2.00	Leave Disturbance based on better	State Opened Back Hedge	Low - Medium	Lower Disturbance Habitat - Good	0.40	Medium	4	Good	5	Low Strategic Alignment	1	5	Standard time to target condition applied	5	0.007	Low	Standard difficulty applied	Low	1	0.07						
2	State Hedge	0.14	Low	0	Good	5	Low Strategic Alignment	1	0.04	Leave Disturbance based on better	State Opened Back Hedge	Low - Medium	Lower Disturbance Habitat - Good	0.14	Medium	4	Good	5	Low Strategic Alignment	1	5	Standard time to target condition applied	5	0.007	Low	Standard difficulty applied	Low	1	0.04						
3	State Opened Back Hedge with trees	0.28	High	0	Medium	2	High Strategic Alignment	1	0.00	Leave to grow in better	State Opened Back Hedge with trees	High - High	Medium - Good	0.28	High	0	Good	5	High Strategic Alignment	1	5	Standard time to target condition applied	5	0.007	Low	Standard difficulty applied	Low	1	0.28						
												0.82																	1.89						

Funtley South

Headline Results

Return to results menu

On-site baseline	<i>Habitat units</i>	73.68
	<i>Hedgerow units</i>	19.67
	<i>River units</i>	0.00
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	91.70
	<i>Hedgerow units</i>	18.53
	<i>River units</i>	0.00
On-site net % change <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	24.46%
	<i>Hedgerow units</i>	-5.80%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	18.02
	<i>Hedgerow units</i>	-1.14
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	24.46%
	<i>Hedgerow units</i>	-5.80%
	<i>River units</i>	0.00%
Trading rules Satisfied?	Yes	

Broad Habitat	Proposed habitat	Area (hectares)	Disturbance		Condition		Strategic significance			Temporal multiplier			Difficulty multipliers				Comments					
			Disturbance	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier	Standard time to target condition/years	Habitat created to advance/years	Delay in starting habitat creation/years	Standard or adjusted time to target condition	Final time to target condition/years	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied	Habitat units delivered	Assessor comments	Reviewer comments
Urban	Developed land; sealed surface	1.06	V Low	0	N/A - Other	0	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	0			Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00	Buildings	
Urban	Vegetated garden	1.41	Low	2	Poor	1	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	1			Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	2.72	Starkness	
Urban	Developed land; sealed surface	1.49	V Low	0	N/A - Other	0	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	0			Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00	Hardstanding	
Urban	Developed land; sealed surface	0.04	V Low	0	N/A - Other	0	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	0			Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00	LEAP	
Urban	Vacant/derelict land/ bareground	0.08	Low	2	Poor	1	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	1			Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	0.15	Path	
Grassland	Other neutral grassland	1.66	Medium	4	Moderate	2	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	5			Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	11.11	Created grassland around development	
Grassland	Other neutral grassland	0.47	Medium	4	Moderate	2	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	5			Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	3.15	Grassland to be created within community park	
Grassland	Other neutral grassland	0.31	Medium	4	Moderate	2	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	5			Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	2.08	Created grassland around development	
Woodland and forest	Other woodland; broadleaved	0.05	Medium	4	Moderate	2	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	15			Standard time to target condition applied	15	0.588	Low	Standard difficulty applied	Low	1	0.23	Woodland created within retained and enhanced woodland to east of the site	
Woodland and forest	Other woodland; broadleaved	1.93	Medium	4	Moderate	2	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	15			Standard time to target condition applied	15	0.588	Low	Standard difficulty applied	Low	1	9.05	Woodland created within community park	
Urban	Sustainable urban drainage feature	0.15	Low	2	Moderate	2	Area/compression not in local strategy/ no local strategy	Low Strategic Significance	1	3			Standard time to target condition applied	3	0.899	Medium	Standard difficulty applied	Medium	0.67	0.36	SUDS features	
Total area		8.66																				
																			Total Units	88.68		

Priority South		A-3 Site Habitat Enhancement		Context / View Counts		Context / View Dates		Main Menu		Subtotals																					
Ranking	Habitat	Baseline habitat						Proposed Habitat (Pre-Exploited but can be overridden)		Change in disturbance and condition				Post development post intervention habitat										Comments							
		Total habitat area	Baseline disturbance level	Baseline disturbance score	Baseline condition index	Baseline strategic significance index	Baseline strategic significance score	Baseline habitat value	Suggested action to address habitat losses	Disturbance change	Condition change	Area (hectares)	Disturbance	Score	Condition	Score	Strategic significance		Temporal risk mitigation				Difficulty risk mitigation				Subline with delivery	Assessor comments	Reviewer comments		
																	Strategic alignment	Ecological position relative	Standard time to target condition/years	Habitat enhanced in subsequent years	Policy in planning habitat enhancement/years	Standard or adjusted time to target condition	Final time to target condition/years	Final time to target condition	Standard difficulty of achievement	Applied difficulty mitigation				Final difficulty of achievement	Difficulty mitigation needed
1	Woodland and shrub - Mixed scrub	1.11	Medium	4	Medium	2	1.04	1.04	Medium - Medium	Medium - Good	0.23	Medium	4	Good	3	Area compromised and in time strategy for local nature	Low Strategic Alignment	1	5			Standard time to target condition	5	0.00	Low	Standard difficulty applied	Low	1	1.07		
2	Woodland - Other wooded grassland	11.04	Medium	4	Poor	1	44.16	44.16	Medium - Medium	Poor - Medium	4.1	Medium	4	Medium	3	Area compromised and in time strategy for local nature	Low Strategic Alignment	1	10			Standard time to target condition	10	0.10	Low	Standard difficulty applied	Low	1	21.06		
3	Woodland and heath - Other wooded grassland	1.21	Medium	3	Medium	2	24.22	24.22	Medium - Medium	Medium - Good	2.34	Medium	3	Good	3	Area compromised and in time strategy for local nature	Low Strategic Alignment	1	10			Standard time to target condition	10	0.10	Low	Standard difficulty applied	Low	1	13.22		
											Total																				
											1.34																				

B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

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1	1	Hedge Ornamental Non Native	0.07	V Low	1	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.07			0.00	0.00	0.07	0.07		
2	2	Native Hedgerow	0.46	Low	2	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	2.76		0.46	0.00	2.76	0.00	0.00		
3	3	Native Hedgerow	0.14	Low	2	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.84		0.14	0.00	0.84	0.00	0.00		
4	4	Native Species Rich Hedgerow	0.09	Medium	4	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	1.08	0.09		1.08	0.00	0.00	0.00		
5	5	Native Species Rich Hedgerow with trees	0.35	High	6	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	6.30	0.35		6.30	0.00	0.00	0.00		
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7	7	Native Species Rich Hedgerow with trees	0.08	High	6	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.96		0.08	0.00	0.96	0.00	0.00		
8	TL1	Line of Trees (Ecologically Valuable)	0.09	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.72	0.09		0.72	0.00	0.00	0.00		
9	TL2	Line of Trees (Ecologically Valuable)	0.07	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.56	0.07		0.56	0.00	0.00	0.00		
10	TL3	Line of Trees (Ecologically Valuable)	0.1	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	0.80	0.1		0.80	0.00	0.00	0.00		
11																				
12																				
13																				
14																				
15																				
			1.76									19.67	0.78	0.68	10.54	4.56	0.32	4.57		



ECOLOGYSOLUTIONS

Part of the ES Group

Ecology Solutions Limited | Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ

01451 870767 | info@ecologysolutions.co.uk | www.ecologysolutions.co.uk