Appendix 4: Addendum to Habitats Regulations Assessment of Proposed Submission Document (LUC Report)

www.landuse.co.uk

Sites and Development Management Development Plan Document: New Forest outside the National Park

Addendum to Habitats Regulations Assessment of Proposed Submission Document

Prepared by LUC
August 2013

Project Title: HRA Advice on Sites and Development Management DPD

Client: New Forest District Council

Version	Date	Version Details	Prepared by	Checked by	Approved by Principal
1_0	03/07/13	Draft report	Jon Pearson	Jeremy Owen	Jeremy Owen
2_0	23/07/13	2nd draft, responding to NFDC comments	Jon Pearson	Jeremy Owen	Jeremy Owen
3_0	01/08/13	Final report	Jon Pearson	Jeremy Owen	Jeremy Owen

www.landuse.co.uk

Sites and Development Management Development Plan Document: New Forest outside the National Park

Addendum to Habitats Regulations Assessment of Proposed Submission Document

Prepared by LUC
August 2013

Planning & EIA
Design
Landscape Planning
Landscape Management
Ecology
Mapping & Visualisation

LUC LONDON
43 Chalton Street
London NW1 1JD
T 020 7383 5784
F 020 7383 4798
london@landuse.co.uk

Offices also in:
Bristol
Glasgow
Edinburgh

FS 566056
EMS 566057

Land Use Consultants Ltd
Registered in England
Registered number: 2549296
Registered Office:
43 Chalton Street
London NW1 1JD
LUC uses 100% recycled paper

Contents

Tables

Figures

1 Introduction

1.1 New Forest District Council (NFDC) adopted its Core Strategy [1] in 2009. NFDC's Local Plan Part 2, the Sites and Development Management Development Plan Document (DPD), is undergoing Examination in Public. NFDC carried out a Habitats Regulations Assessment (HRA) Screening of the Proposed Submission version of the Local Plan Part 2 in January 2012, which formed 'Doc12' of the evidence submitted to support the DPD [2].

1.2 The Inspector has raised concerns in his Preliminary Conclusions on Compliance with the Habitat Regulations [3] that "*the assumptions made in the Habitats Regulations Assessment (Doc12) were not adequately delivered in the Local Plan and that further work was required to specify the nature of mitigation measures and their linkage to housing delivery*".

1.3 The Inspector notes in Section 3 '*The Way Forward'* of his Preliminary Conclusions that "*It is very difficult to suggest the way forward other than in broad, procedural terms. The way forward needs to be evidence-led and procedural steps will need to be revisited to ensure compliance with the Habitat Regulations. The disconnect between what the HRA assumes to be delivered and what the plan and other measures actually deliver needs to be overcome."*

1.4 Paragraph 3.12 goes on to state that "*It seems essential for the Council to somehow quantify in broad terms the scale, type, location and relationship to the scale and location of residential development of new or improved open spaces (SANGS) that would complete the necessary suite of mitigation, within the context of what else is actually being done (e.g. adherence to CS7 and only limited provision to address existing shortfalls) and the absence of progress on wider mitigation…*"

1.5 He suggests in paragraph 3.8 that further outputs are likely to include:

- "*Evidence gathering or application of existing evidence;*
- *A revised HRA taking into account additional evidence and realistic proposals;*
- *A new policy in the Local Plan for mitigation (and DM9 rewritten with a much clearer and narrower scope); and*
- *A revised IDP to indicate appropriate priority for open space projects which are necessary for mitigation*."

1.6 LUC has been appointed by NFDC to provide advice in relation to the Inspector's concerns about recreational pressure associated with planned residential development and the measures envisaged by NFDC to mitigate these. In doing so, LUC has relied on the existing HRA of the Sites and Development Management DPD to identify the European sites at which likely significant recreation effects from the residential development proposed by the plan cannot be ruled out; no attempt has been made to identify additional recreational effects. Instead, LUC's work has focused on review of evidence for recreational impacts in order to confirm the recreational effects already identified and to better understand the nature of likely effects. This in turn has informed our advice to NFDC on the mitigation needed to avoid likely significant effects on European sites. This HRA Addendum Report sets out the results of LUC's work.

1.7 The project has been conducted in close consultation with a Steering Group comprising representatives of NFDC, Natural England, New Forest National Park Authority (NPA), the Royal Society for the Protection of Birds (RSPB), and Hampshire and Isle of Wight Wildlife Trust. LUC would like to thank Steering Group members for their invaluable assistance, including commenting on the drafts of much of the material contained in this report, helping to identify relevant evidence and providing advice on a suitable mitigation strategy.

1.8 The remainder of this HRA Addendum is structured as follows:

- Section 2: Findings of HRA of Sites and Development Management Proposed Submission DPD.
- Section 3: Context and development proposed.

- Section 4: Evidence on recreation pressure and mitigation options.
- Section 5: Likely recreation effects of proposed development.
- Section 6: Mitigation strategy.
- Section 7: Conclusions of HRA Addendum.
- Section 8: References
- Appendices : Qualifying features and conservation objectives of identified European sites.

2 Findings of HRA of Sites and Development Management Proposed Submission DPD

2.1 The European sites that fell within the scope of the original HRA Screening of NFDC's Local Plan Part 2 (January 2012) are as follows:

- River Avon Special Area of Conservation (SAC); Avon Valley Special Protection Area (SPA); Avon Valley Ramsar site.
- Dorset Heathlands SAC; Dorset Heathlands SPA; Dorset Heathlands Ramsar site.
- The New Forest SAC; New Forest SPA; The New Forest Ramsar site.
- Solent and Isle of Wight Lagoons SAC; Solent Maritime SAC; Solent and Southampton Water SPA; Solent and Southampton Water Ramsar site.

2.2 The Inspector's concerns relate to the recreational pressures on European sites identified by NFDC's original HRA of the Sites and Development Management DPD and this is the topic on which LUC has been appointed to advise.

2.3 Review of the original HRA Screening reveals that prior to mitigation, potential recreation pressure on European sites from the Sites and Development Management DPD alone is only identified for Solent and Southampton Water SPA and Ramsar site and The New Forest SAC, SPA and Ramsar site. Recreational effects on these European sites were also identified in combination with the plans of neighbouring districts, with in-combination recreation effects also identified on Solent Maritime SAC.

2.4 In this HRA Addendum the European sites for which recreation effects have been identified are generally grouped together on the basis that mitigation actions which serve to reduce visitor numbers to the European site or manage their behaviour within it will serve to reduce recreation pressures on all of the designated features at that location. For the same reason, the HRA Addendum has not examined detailed evidence on all possible types of recreation impact; once it was clear that recreation effects of any kind could not be ruled out at a particular European site, the work moved onto examine how recreation pressure in general could be mitigated at that site. The European site groupings used are as follows:

- 'New Forest European sites' = The New Forest SAC; New Forest SPA; The New Forest Ramsar site.
- 'Solent Coast European sites' = Solent Maritime SAC; Solent and Southampton Water SPA; Solent and Southampton Water Ramsar site

2.5 The parts of the Sites and Development Management DPD responsible for these potential recreation effects, the related mitigation recommended by the HRA and the conclusions of the HRA are reproduced from Table 3.3 of the original, submitted HRA in Table 2.1. Table 2.2 reproduces the in-combination recreation effects from Table 3.5 of the original, submitted HRA. Those parts of Table 3.3 and Table 3.5 of the original, submitted HRA relating to types of effect other than recreation have not been reproduced.

2.6 In light of the concerns raised by the Inspector, further work (this HRA Addendum) is now required to establish the likely extent of the recreation effects already identified in the HRA in order to inform judgements on the mitigation needed to avoid likely significant effects on the New Forest European sites and Solent Coast European sites.

Table 2.1 Recreation effects on European sites identified by the HRA of the Sites and Development Management DPD [2]

Policy / proposal in question	Site(s) affected	Nature of effect	Avoidance/Mitigation recommended by HRA	Conclusion of HRA –will there be an overall adverse impact on site integrity?
TOT11: Eling Wharf	Solent & Southampton Water SPA/Ramsar	Some potential for limited increases in recreational pressures…	Provision of open space and a natural play space for children within the development. Formulation and secure delivery of Green Infrastructure Strategy for Totton. High standard of site design, limiting disturbance cause by light and sound coming from the site.	**A full Appropriate Assessment of Policy TOT11 has been undertaken. (See Background Paper 48: Appropriate Assessment of Eling Wharf)**
TOT15(5). Land north of Commercial Road (nos. 81-97 including Red Lion PH)	Solent & Southampton Water SPA/Ramsar	Some potential for limited increases in visual and noise disturbance...	High standard of site design, limiting disturbance cause by light and sound coming from the site.	**No** – providing avoidance recommendations followed.
TOT15(6). Railway sidings, Junction Road	Solent & Southampton Water SPA/Ramsar	Some potential for limited increases in recreational pressures…	Provision of open space within the development. Formulation and secure delivery of Green Infrastructure Strategy for Totton.	**No** – providing mitigation recommendations followed**.**
MAR6:Cracknore Industrial Park	Solent & Southampton Water SPA	Limited potential for increases in recreational pressures as the result of improvements to the public slipway.	Provision of information signs educating the public on the potential impacts of recreational disturbance.	**No** – providing mitigation recommendations followed.
HYD2: Land off Cabot Drive	Solent & Southampton Water SPA/Ramsar	Some potential for limited increases in recreational pressures…	Provision of open space and a natural play space for children within the development. Formulation and secure delivery of Green Infrastructure Strategy for Hythe.	**No** – providing mitigation recommendations followed.

Policy / proposal in question	Site(s) affected	Nature of effect	Avoidance/Mitigation recommended by HRA	Conclusion of HRA –will there be an overall adverse impact on site integrity?
HYD8.2: Pier Head Bus/ferry interchange improvements	Solent & Southampton Water SPA/Ramsar	Some potential for limited increases in recreational pressures.	Barrier between promenade and affected site.	**No** – providing mitigation recommendations followed.
HYD8.3 Cycle route connecting Applemore to National Cycle Network 2	New Forest SAC/SPA/Ramsar	Some potential for increased public access to the New Forest.	Creation of a screen or barrier between the end of the cycle path and the New Forest SAC/SPA/Ramsar to discourage public access to this area.	**No** – providing mitigation recommendations followed.
LYM4: Land south of Ampress Lane, north of Buckland Gardens	Solent & Southampton Water SPA/Ramsar	Some potential for limited increases in recreational pressures.	Formulation and secure delivery of Green Infrastructure Strategy for Lymington.	**No** - this site is too small to provide open space on site under policy CS7 – however, the site is opposite Buckland Rings (a large area of open space within the National Park) and it is likely that residents would use this area for recreation.

Table 2.2 Recreation effects on European sites caused by the plan in combination with other plans or projects [2]

Policy / proposal in question	Site(s) affected	Nature of effect from Site & DM DPD	Other plan / project in question	Nature of effect from other plan or project	Possible combined effect	Conclusion of HRA –will there be an overall adverse impact on site integrity?
Sites for Residential Development	New Forest SAC/ SPA/ Ramsar	Recreational pressures	Housing allocations within the South East plan. Housing development targets in the Poole Core Strategy and existing Local Plans within the South West region. Hampshire and Wiltshire Minerals Plan	Recreational pressures	Substantial growth in South Hampshire and South East Dorset is likely to lead to increased recreational pressures on the New Forest.	**Uncertain** – significant effects are not identified for the majority of sites providing mitigation and avoidance measures identified (at the Core Strategy Stage) for inclusion in the Sites and Development Management DPD are implemented.
Sites for Residential Development	Solent Maritime SAC Solent & Southampton Water SPA/ Ramsar	Recreational pressures	Housing development targets in the Poole Core Strategy and existing Local Plans within the South West region. Hampshire and Wiltshire Minerals Plan	Recreational pressures	Growth in South Hampshire could lead to an increase in recreational pressures on the coastal environment.	**Uncertain –** significant effects are not identified for the majority of sites for development included in the Plan, but there is one policy (TOT11) where significant effects cannot be ruled out at this stage. (See Appropriate Assessment: Eling Wharf: Background Paper 48)

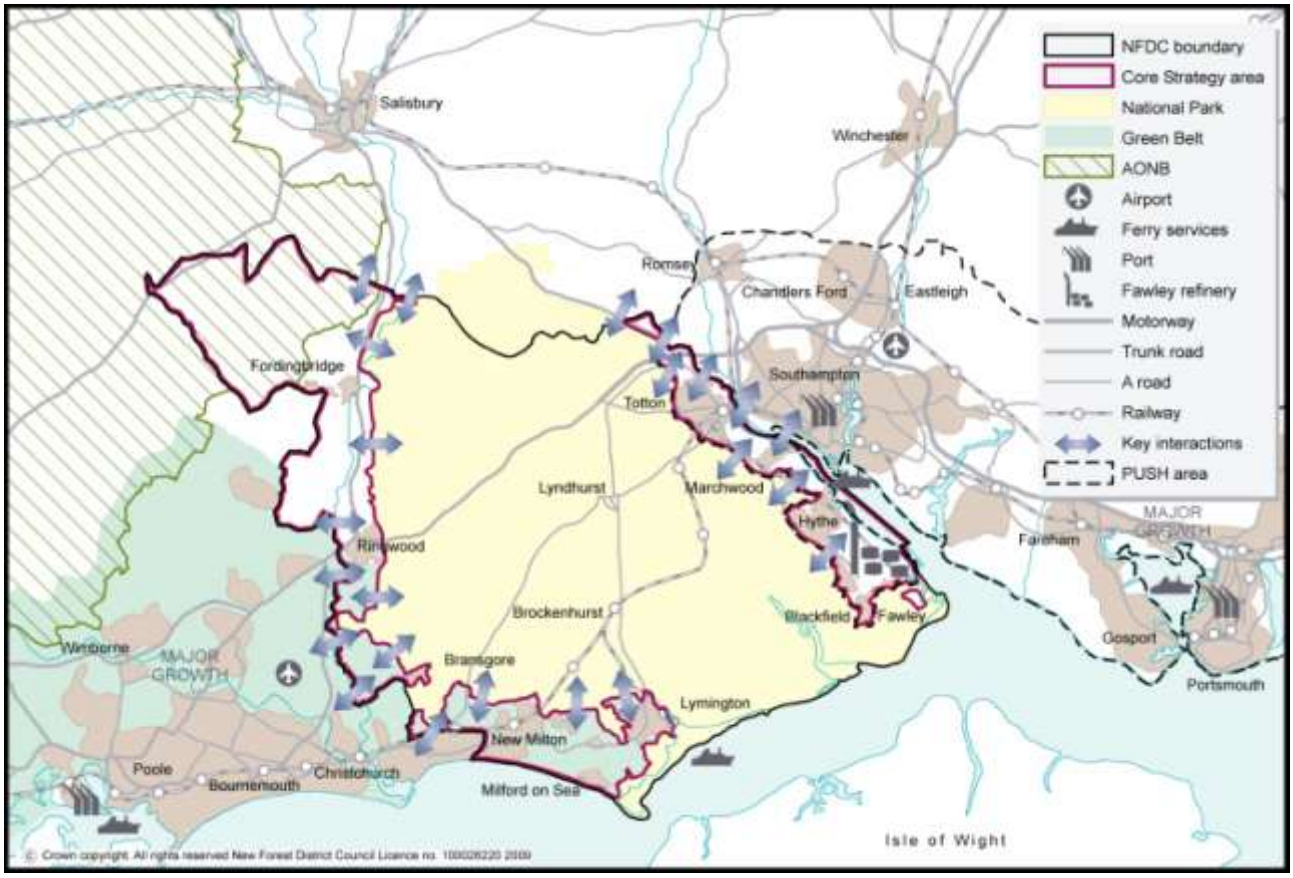
3 Context and development proposed

3.1 This section provides a brief overview of New Forest District and of relevant population and housing data. It then describes the scale and location of residential development proposed in relation to the New Forest and Solent Coast European sites.

The Plan Area

3.2 An overview of the Plan Area is provided by Figure 3.1 and by the brief profile below which are drawn from NFDC's Core Strategy [1]. It comprises three separate "sub-areas" around the edges of the New Forest National Park and between the major conurbations in South Hampshire and South East Dorset. The Plan Area is characterised by a dispersed pattern of small to medium sized towns and villages around the edge of the New Forest. The Plan Area lies in an attractive part of coastal southern England. It is a popular area in which to live and work, and to visit. It is generally of high environmental quality and is located in a wider area that is particularly rich in terms of biodiversity. The large South East Dorset and South Hampshire conurbations on either side of the Plan Area, and to a lesser extent Salisbury lying to the north of the western part of the Plan Area, offer wider employment, shopping, social, cultural and transport facilities; but can add to housing, traffic and other pressures on the Plan Area. Residents of the Plan Area can enjoy the very special qualities of the adjoining New Forest National Park, but developments in the Plan Area can affect the National Park's sensitive environment.

Figure 3.1 New Forest District Plan Area



Demographic data

National statistics

3.3 Table 3.1 sets out housing and population statistics for the New Forest (including the National Park), based on Office for National Statistics (ONS) trend-based population and household projections. These suggest that the population of the New Forest is set to increase by approximately 13% (23,000) during 2001-2021, while proportionate growth in the number of households is forecast to be greater at 17% (13,000) due to declining household sizes.

Table 3.1 Housing and population statistics: New Forest District including the National Park

Variable	Units	Source	New Forest District (inc. National Park)	England
Area	Hectares	2	75,321	13,027,872
Population, Apr 2001	Count	1	169,331	49,138,831
Population, Mar 2011	Count	2	176,462	53,012,456
Population, 2021	Count	4	191,937	57,687,784
Number of households, 2001	Count	3	72,264	20,522,527
Number of households, 2011	Count	3	76,951	22,102,236
Number of households, 2021	Count	3	84,976	24,307,495
Persons per household, 2001		5	2.34	2.39
Persons per household, 2011		5	2.29	2.40
Persons per household, 2021		5	2.26	2.37
Number of dwellings, Apr 2001	Count	1	74,747	21,206,804
Number of dwellings, Mar 2011	Count	2	79,560	22,947,500
Sources				
1. ONS Census data 2001				
2. ONS Census data 2011				
3. ONS 2011-based household projections (Table 406)				
4. ONS Interim 2011-based Subnational Population Projections				
5. LUC calculation				

Local statistics

3.4 Hampshire County Council has produced its own set of Long Term Population Projections which make use of the housing figures in the South East Plan (published in May 2009) and are calculated using the 'Chelmer model'. These long term projections formed the basis of the population statistics set out in NFDC's Core Strategy [1] and in contrast to national statistics, suggest that the population in the Plan Area (as opposed to New Forest District including the National Park) will decline from approximately 141,000 in 2006 to approximately 133,000 in 2026. One reason for the difference between the two sets population forecasts is the more rapid decline in household size used to inform the Hampshire projections. However, the Hampshire projections also take account of the number of dwellings forecast to be built over the plan period, which has the effect of constraining population, whereas the sub-national projections roll forward

past trends in population growth and migration assumptions, regardless of whether housing will be built to support this increase.

3.5 Another notable demographic trend is a projected increase in the age structure proportion of the Plan area's population with the proportion aged over 65 forecast to increase from 25% in 2006 to 33% in 2026 whilst the proportion of working age people is set to decline. The southern coastal towns have a particularly high proportion of residents aged over 65. The Council considers the Hampshire County Council population projections to be the better forecast of the Plan Area's future population.

3.6 Whilst the varying population projections above introduce some uncertainty, it should be noted that NFDC are not required to avoid or mitigate potential recreation effects associated with population growth but rather that associated with the residential development within the Local Plan Part 2.

Scale of development in NFDC and neighbouring districts

3.7 The NFDC Core Strategy (Policy CS10) provides for a minimum of 3,920 new dwellings during 2006-2026, plus up to 810 dwellings to meet local affordable need, a total of 4730 dwellings. Table 3.2 provides an update to Table 2 of the Core Strategy to show the anticipated completions and proposed development distribution as at April 2014, the expected adoption date of the Local Plan Part 2. This shows that, excluding provision to meet local affordable need, 3,935 dwellings are now expected to be provided to meet the minimum requirement of 3,920 set out in the Core Strategy. Provision to meet local affordable housing needs is now expected to be 640 dwellings, compared to the Core Strategy figure of up to 810 dwellings. The total housing provision over the plan period has therefore reduced from 4730 dwellings to 4,575 dwellings.

3.8 The main centres for development are in and around the settlements of Totton, Marchwood, Hythe, Lymington, New Milton, Ringwood and Fordingbridge. The spatial distribution of the 4,575 dwellings across the District in relation to the European sites of the New Forest and Solent Coast is shown in Figure 3.2.

3.9 It is apparent that of the 4,575 dwellings to be provided over the plan period, 2,310 (approximately 50%) will already have been developed and a further 470 committed (11%) by the time the Local Plan Part 2 is adopted, with 1,795 (39%) yet to be committed or developed after 2014. The completions for the first ten years of the plan period are higher than in previous versions of the table, in large part to a technical change in the NPPF which allows for the inclusion of supply from windfalls which were previously excluded from the earlier periods of the plan. Around 100 more dwellings have been included from this source. A further increase in column (g) arises from the decision of the Local Plan Inspector to seek provision in New Milton for a further allocation of around 30 dwellings to meet local needs under Policy CS12.

Table 3.2 Updated Core Strategy Table 2: Proposed housing distribution[1]

Proposed Housing Distribution April 2006 - March 2026 (Rounded Figures)							
Settlement	**(a) Already developed 2006-2014**	**(b) Large site commitments @ April 2014**	**(c) Large urban potential**	**(d) Small urban potential**	**(e) Further allocations needed**	**(f) Total 2006-2026**	**(g) Proposed additional provision to address local affordable housing needs**
Totton & Eling	420	250	175	85	100	1030	-
Marchwood	60	0	10	5	0	75	130
Hythe & Dibden	275	0	25	55	0	355	45
Holbury, Fawley & Blackfield	205	0	0	60	0	265	30
Plan area east sub-total	**960**	**250**	**210**	**205**	**100**	**1725**	
Lymington & Pennington	535	150	20	120	0	825	125
Milford-on-Sea	85	0	0	45	0	130	30
Hordle & Everton	50	0	0	35	0	85	20
New Milton	400	60	10	135	0	605	140
Plan area south sub-total	**1070**	**210**	**30**	**335**	**0**	**1645**	
Bransgore	45	0	0	5	0	50	-
Ringwood	175	10	0	75	150	410	-
Fordingbridge	40	0	0	40	0	80	100
Ashford & Sandleheath	20	0	0	5	0	25	20
Plan area west sub-total	**280**	**10**	**0**	**125**	**150**	**565**	
Possible additional developments at smaller settlements							
Total	**2310**	**470**	**235**	**665**	**250**	**3935**	**640**

(a) Number of dwellings completed (net of losses) between April 1st 2006 and March 31st 2014 (estimated for 2013/14)
(b) Existing allocations and sites of 10 or more dwellings with planning permission which were either not started or were under construction at April 1st 2014 (sites discounted by 10% to allow for an element of non-delivery)
(c) Sites within settlements allocated in the Local Plan Part 2 for 10 or more dwellings (discounted by 10% to allow for an element
(d) Additional development on sites of less than 10 dwellings anticipated within settlements (including unimplemented small site planning permissions)
(e) Sites allocations at Totton and Ringwood to meet housing requirement
(f) Total provision proposed to meet the housing requirement of 3,920
(g) Proposed allocations to meet an identified local need

3.10 Table 3.3 shows the status of key Local Plan documents, Habitats Regulations Assessments of those plan documents and levels of housing growth in the districts neighbouring New Forest District. This demonstrates that the scale of housing growth proposed by NFDC is quite low relative to the neighbouring districts (about 5% of the total housing proposed, albeit that different time periods are covered by some of the plans). It should be noted, however, that much of this development in neighbouring districts, particularly that in the large unitary authority of Wiltshire, will occur at a considerably greater distance from the New Forest and/or Solent Coast European sites than development in New Forest District. This is significant since more than one third of current visitors to the New Forest National Park live within approximately 5 miles (c. 8 km) of its boundary [4] and the bulk of projected new visitors (85%) associated with housing development in the South East and South West regions will live within 20 km [5].

3.11 There has been no detailed assessment of the overall increase in visitor numbers to the New Forest SPA arising from the planned development set out in Table 3.3.

[1] Provided by NFDC, 04 June 2013

Table 3.3 Districts neighbouring NFDC: Status of Local Plan and scale of residential development

District	Core Strategy DPD and HRA status	Site Allocations DPD and HRA status	Housing growth provided by Core Strategy
Southampton City Council	Adopted (Jan 2010) HRA of pre-submission (adopted) CS (Dec 2008)	HRA of City Centre Action Plan (Jan 2012)	16,300 (2006-2026)
Wiltshire	Pre-submission (Feb 2012) HRA of Pre-submission (Feb 2012)	Site allocations at the district level. South Wiltshire only district with a recent core strategy with some relevant site allocations (Jul 2009). Gypsy and Travellers Site Allocations DPD to be examined late 2013	37,000 (2006-2026)
Bournemouth (not adjacent but a major urban area within 3 km of New Forest District and 7 km of New Forest SAC)	Adopted (Oct 2012) HRA of Pre-submission (Aug 2011)	Dorset wide gypsy and traveller (including travelling show people) site allocations joint DPD preferred options being drafted.	14,600 (2006-2026)
Test Valley	Revised Local Plan Preferred Approach (Feb 2013) HRA of Revised Local Plan Preferred Approach (Feb 2013)	HRA of Designations DPD (Jan 2012)	10,026 (2011-2029)
East Dorset + Christchurch (joint planning documents)	Pre-submission (Dec 2012) HRA of Pre-submission DPD (Nov 2012)	Work on Site Specific Allocations DPD not yet begun	Christchurch: 3,375 East Dorset: 5,250 Total: 8,625 (2013-2028)
Isle of Wight (access to New Forest via a short ferry crossing to Lymington)	Adopted (Mar 2012) HRA of pre-submission (adopted) CS (Apr 2011)	Site allocations to be covered in forthcoming Area Action Plans and Delivery and Management DPD due between Aug 2013 and Dec 2015.	8,320 (2011-2027)
New Forest NPA	Adopted (Dec 2010) HRA of pre-submission (adopted) CS and Development Management DPDs (Jan 2010)	Site allocations to be covered in forthcoming review of core strategy in 2014.	176 (2010-2026)

3.12 In addition to the DPDs set out in Table 3.3 the local authorities from South East Dorset in whose area the Dorset Heaths SAC/ Dorset Heathland SPA and Ramsar site are predominantly located (Bournemouth, Christchurch, Dorset, East Dorset, Poole and Purbeck) have agreed to produce a joint Development Plan Document. The Dorset Heathland joint Development Plan Document, currently at Preferred Options stage, will provide the necessary cross boundary approach to managing the Dorset Heaths.

New Forest District Council HRA Advice

Figure 3.2

NFDC Housing and Informal Open Space Provisions in Relation to the New Forest and Solent Coast European Sites

Total Homes to be Provided in Plan Period (Number Not Yet Commited at 31/03/14)

New Forest District

Parish Boundaries

District Boundaries

New Forest National Park

Total Additional Informal Open Space to be Provided (ha)

New Forest European sites (The New Forest SAC; New Forest SPA; The New Forest Ramsar site)

Solent Coast European sites (Solent Maritime SAC; Solent and Southampton Water SPA; Solent and Southampton Water Ramsar site)

Map Scale @ A3:1:150,000

LUC

LUC LDN 5706-01_007_A3_Open_Space_RevB_1Sheet 18/07/2013

Source:

4 Evidence on recreation pressure and mitigation options

4.1 As part of the addendum to the HRA, a review has been undertaken of the available evidence which can be used to inform a better understanding of the likely impacts of residential development on the New Forest and Solent European sites, and the appropriate mitigation of recreational impacts arising from new residential development on those European sites. It should be noted that the purpose of such mitigation measures is to address recreational impacts on those parts of the National Park that are subject to the international nature conservation designations, not to reduce visits to the National Park as a whole by local people.

4.2 This section reports evidence on the existence of likely significant recreation effects from residential development on the European designated nature conservation interest of the New Forest and Solent Coast, the two areas highlighted by the project Steering Group as being the focus for LUC's review. Where the studies have found that such effects are likely, their recommendations on appropriate mitigation actions are also reported. The studies have been identified in consultation with a Steering Group as providing the best available evidence of relevance to the project objectives.

4.3 The lack of data or evidence relating specifically to the New Forest European sites is a particular issue; most studies/data instead relate to the New Forest National Park within which the European sites are located.

New Forest Visitor Research [4]

Introduction

4.4 The Countryside Agency commissioned Tourism South East to undertake a programme of research in 2004-05 to identify the profile of visitors to the New Forest National Park; explore the characteristics of visits; identify the main reasons for visiting; identify access points used, routes taken and activities pursued; and produce estimates of visitor volumes and their economic impact. Although not aimed at identifying potential recreation pressure on biodiversity sites, the study is useful in characterising the scale and pattern of visitors to the New Forest National Park as a whole and is a key source of data for other studies reviewed in this HRA Addendum, including the PROGRESS Project [6] and the Footprint Ecology study on changing patterns of visitor numbers within the National Park [5]. The New Forest NPA has confirmed that there is no visitor survey work that only covers the New Forest European sites.

4.5 The two main methods of collecting primary data were:

- A site-based interview and observation survey at 62 locations within the National Park over a 12 month period, to provide a broad spread of users and recreation sites.
- A household telephone interview survey, targeting 2,164 households within the National Park boundary and adjacent areas.

4.6 The results of the household survey were broken down into three geographic categories:

- Households within the National Park.
- Households in an area bordering the National Park, within approximately 5 miles (8km) of the Park boundary.
- Households from more distant major urban catchments, including Southampton, Bournemouth and Salisbury.

4.7 The study results outlined below relate to the telephone survey of households in areas bordering the National Park since these provide the best indication of the likely behaviour of occupiers of the residential development proposed by NFDC's Sites and Development Management DPD.

Household survey results

4.8 83% of households located in an area bordering the National Park had a member who had visited it for recreation in the past 12 months. Of these households, 80% visit at least once a month, with 52% visiting at least weekly.

4.9 Recreational visits are spread fairly uniformly across the year, with only a small bias towards the Spring and Summer seasons.

4.10 The main reasons for householders visiting the National Park are to walk (49%, of whom two thirds walk for more than one hour), walk the dog (16%), drive around sightseeing from the car (8%) or to generally relax, enjoy the views or have a picnic (6%).

4.11 The places most frequently cited by households located in areas adjacent to the National Park as being one of their top three destinations in the New Forest are Lyndhurst (23%), Burley (22%), Brockenhurst (20%), Beaulieu (18%) and Lymington (12%).

4.12 When planning their visit to the New Forest, households in adjacent areas rely heavily on local knowledge (67%), reducing the need for other sources such as maps (14%), guide books (8%), a visitor information centre (3%) or the internet (1%).

4.13 The usual mode of transport for households in adjacent areas to visit the New Forest for recreation is by car (91%) with very few walking (4%) or cycling (2%). The choice of transport mode is influenced mainly by convenience and ease of access.

Implications for mitigation of recreation pressure

4.14 The survey results show that there is a high probability that new householders in New Forest District outside the National Park will regularly visit the National Park by car for recreation, that they are likely to walk for more than an hour, but less than two hours from their parked car, sometimes with a dog, and that their choice of where to visit within the National Park will rely heavily on local knowledge. This suggests that measures such as reducing vehicle access, reducing car parking spaces, regulating verge parking, and enforcing parking restrictions (for example during sensitive breeding seasons) may be more effective than visitor education when it comes to influencing choice of recreation destination within the National Park. The success of such access management in reducing disturbance at New Forest European sites could be limited, however, by the long distances walked by recreational visitors. Education and warden supervision may therefore still play an important role in regulating visitor behaviour so as to reduce potential adverse effects on designated biodiversity assets. The fact that choice of transport mode is heavily influenced by convenience and ease of access suggests that SANGS which are close to residential development or which are well served by public transport may also be successful in diverting recreation visits from New Forest European sites.

PROGRESS Project [6]

4.15 Promotion and Guidance for Recreation on Ecologically Sensitive Sites (PROGRESS) was a four year, EU-funded, project. It examined how the needs of conservation and recreation could be reconciled in the New Forest National Park and the Forest of Fontainebleau near Paris, both of which have seen a significant increase in visitor numbers in recent decades, with visible effects on their ecology.

4.16 The project's approach was to draw on expert knowledge and extensive surveys (including the visitor survey [4] reviewed above) and studies to create a clear picture of the problems to be tackled, to develop and implement a series of community and on-site actions and to develop partnerships with local tourism providers to promote key conservation messages. Although

surveys and actions aimed at mitigating recreational disturbance in the New Forest were not limited to the SPA, project objectives included:

- *"To evolve partnerships that secure sustainable recreation in Natura 2000 sites."*
- *"To enhance visitor/user appreciation of, and greater personal responsibility for, the conservation of natural resources and the specific needs of the two Natura 2000 sites (including targeting users' lack of knowledge)."*

4.17 Information gathered by this project about outdoor recreation in the New Forest National Park formed a fundamental part of the evidence for the first Footprint Ecology study [5]; the elements of most relevance to this report are reviewed under that study.

4.18 Actions implemented in the New Forest National Park by the Forestry Commission as part of this project which are of particular relevance to mitigating recreational disturbance included:

- Trial closure of selected car parks during March-June to limit recreational access to ground nesting bird sites.
- Permanent closure of a number of lay-bys to limit access to sensitive sites.
- Improving three large fenced off areas of the New Forest ('inclosures') to increase their attractiveness for recreational use by, for example, thinning trees, installing picnic areas and improving accessibility to disabled users and horse riders, to relieve pressure on sensitive areas.
- Making plans to upgrade existing car parks at locations capable of coping with additional visitors.
- Placing information boards in and around car parks located close to sensitive ground nesting bird breeding grounds which encourage visitors to stay out of these areas.

Implications for mitigation of recreation pressure

4.19 In commenting on work carried out through PROGRESS to manage the impact of recreation within the New Forest, the report states that it is too early to say whether measures such as seasonal car park closures have produced more favourable breeding habitat for birds or led to increased bird numbers, although the RSPB and Forestry Commission planned to monitor this. Similarly, the success of measures designed to relieve visitor pressure on the SPA by offering alternative recreational facilities beyond its boundaries, such as at Watchmoor Wood, was unknown at the time of the report.

Monitoring the effectiveness of access management in the New Forest [7]

4.20 The Forestry Commission has carried out bird surveys in areas of New Forest National Park surrounding eight car parks that have undergone seasonal closures each year from 2006 to 2011. As described under the review of the PROGRESS Project (above), these trial car park closures form part of a suite of access management measures undertaken to test their effectiveness in mitigating recreational disturbance on breeding birds in the New Forest. The Forestry Commission has also commissioned a final survey for 2013 (the car parks have remained closed since the last PROGRESS survey) with the aim of drawing together all of the survey results and drawing conclusions.

4.21 The overview report had not yet been produced at the time of writing but LUC has obtained and briefly reviewed copies of the annual survey reports. These reveal that the following wader species were surveyed during the breeding season (March-June): Northern Lapwing, Common Snipe, Eurasian Curlew and Common Redshank. These species were chosen because "*The valley mires and the wetter heathlands have long been recognised as valuable habitats for waders breeding in the New Forest*".

Implications for mitigation of recreation pressure

4.22 Since the species chosen are not Annex I bird species for which the New Forest SPA is designated, this monitoring work is of limited use in assessing the likely effectiveness of seasonal car park closures as a tool for mitigating recreational disturbance on the New Forest SPA. In any event, the survey data do not reveal any definitive trends over the period of car park closures, with bird population numbers fluctuating from year to year. This means that the study cannot help to inform NFDC's strategy for mitigating recreational disturbance in the New Forest European sites and no better evidence from the New Forest is thought to exist.

Changing patterns of visitor numbers within the New Forest National Park [5]

Introduction

4.23 This study has two main strands. Firstly, it explores whether current visitor levels to the New Forest are having a detrimental effect on three Annex 1 heathland bird species (nightjar, woodlark and Dartford warbler). These species are used as indicators of the wider health of the National Park's designated interest since research in other areas of southern England has shown that they are sensitive to human disturbance. This strand is explored by reference to Forestry Commission visitor count data from 2004 and 2005 and national bird surveys from 2004 and 2006.

4.24 Secondly, the study models the change in visitor patterns to the Park that can be expected as a result of housing development. This is done by reference to visitor data (largely from the PROGRESS research), the current distribution of housing in distance bands around the New Forest boundary and levels of housing growth provided for each district in the South East and South West Regional Spatial Strategies (RSS)[2]. The report ends by making recommendations on monitoring, refinement of visitor models and visitor management options.

Existing visitor patterns

4.25 This study drew its visitor pattern information largely from the New Forest Visitor Survey [4] conducted as part of the PROGRESS Project. That visitor survey and the most relevant data from it are reviewed separately above and have not been reproduced here.

Evidence for existing disturbance impacts to Annex 1 birds

4.26 The modelling failed to find a statistically significant impact from visitor pressure on any of the three indicator bird species studied. The study notes that given this finding and the fact that densities of the indicator Annex I bird species are markedly lower in the New Forest than in similar habitats such as the Dorset Heaths and Thames Basin Heaths, further work is needed to understand these comparatively low densities. There is some evidence that two of the species (nightjar and Dartford warbler) avoid areas of suitable habitat where predicted visitor numbers are very high but this avoidance is not enough to account for the low overall densities. The overarching conclusion is that in the absence of further work it is difficult to determine the extent to which disturbance may have consequences for Annex I bird populations.

Current distribution of housing, likely change and consequences of housing growth for visitor patterns

4.27 Based on residential address data, population densities in the New Forest are estimated to be high to the east of the National Park (1,000-2,000 people per km^2), fairly high to the west and south west of the Park (500-1,000 people per km^2) and low to the north of the Park and within it (0-100 people per km^2).

4.28 The study estimates that development during 2006-2026 within 50 km of the New Forest National Park (but outside its boundary) will result in an additional 1.05 million visitor days per annum, an

[2] Both revoked in 2013 except for Policy NRM6 of the South East RSS: Thames Basin Heaths Special Protection Area

increase of 7.9%. It estimates that the bulk of these new visitors (85%) associated with housing development in the South East and South West regions will live within 20 km, and particularly 7 km, of the Park and based on existing visitor patterns, they are likely to visit more frequently than visitors from further afield, visit throughout the year, and be more likely to be dog-walkers and rely on local knowledge to plan their visits.

4.29 In reflecting on the accuracy of its predictions, the study notes that although it assumes that the number of residents per dwelling will remain constant into the future, current trends actually show a general decline in household size across the South East. This could result in the study over-estimating visitor growth but this could be offset by increases in the average age of the regional population, since older age groups are more likely to be day-visitors to the Park.

4.30 Even in the absence of evidence of significant existing recreation pressure on Annex I birds, the predicted scale of increase in visitor numbers (particularly local day-visitors who are more likely to be dog walkers and to stray of the beaten track) combined with uncertainty over the reasons for current low densities of birds leads the study to conclude that "*it would seem necessary that a package of mitigation measures is implemented to ensure no adverse effects*".

Implications for mitigation of recreation pressure

4.31 The study emphasises the need to tailor a package of mitigation measures to the unique nature of the New Forest and its visitor patterns (see above) but also points out that the large area of land, existing expertise in access management, and an infrastructure already geared to cope with large numbers of visitors provide a good starting point. Suggested mitigation measures comprise:

- A monitoring strategy – detailed field work to understand low densities of the three indicator species; regular monitoring of other key species and locations where there are concerns about recreational pressure; annual monitoring of visitor levels; monitoring of changes in visitor patterns associated with access management measures.
- Refinement of visitor models – accounting for the spatial distribution of paths and points of interest within the New Forest; incorporating actual route data; exploring the spatial distribution of other species to predicted visitor pressure.
- Car-parking – managing car parking to re-distribute visitors.
- Access management measures - promotion of less sensitive areas to visitors; provision of interpretation and path enhancement in less sensitive areas; promotion of issues such as the need to keep dogs on leads.
- Alternative green space – the report states that any alternative green space must be very carefully considered in terms of its ability to attract people who would otherwise visit the New Forest. It notes the lack of long term visitor monitoring at green spaces provided as a means of reducing visitor pressure on sites of nature conservation importance elsewhere and cites a Portsmouth recreation survey which suggested that neither country parks nor tourist attractions are regarded as alternatives to visiting the New Forest. It concludes that the visitors who are likely to be the easiest to divert from the New Forest are those who do not stay overnight and that potential alternative green spaces need to be located closer to development areas than the sensitive site to be protected and might be found within parts of the New Forest that currently have no public access. These would need to be located in area of low sensitivity to disturbance. Sites to attract dog walkers should provide safe off-road parking, a range of routes, and be in locations perceived to maximise enjoyment of the dog.

Urban development and the New Forest SPA [8]

Introduction

4.32 This report considers the evidence of impacts from urban development on the designated European interest features in the New Forest SPA, whether measures are necessary to avoid likely significant effects and, if so, the measures that might be required. It draws on existing bird

survey data for the three indicator species studied in the earlier Footprint Ecology report [5] as well as new interviews with New Forest management and conservation experts.

Views of interviewees

4.33 The expert interviews revealed the following views:

- New housing has led to increased numbers of people accessing the New Forest SPA, thereby increasing the potential for habitat damage and species disturbance.
- Access levels have increased over time, particularly cycling, horse riding, dog walking and organised events.
- Many recreational visits originate from close to the SPA (i.e. from within or just outside the National Park), with a particular increase over the past 30 years in people travelling by car for daily dog walks.
- Impacts of recreation are not focused around the New Forest's settlements because of the significant proportion of non-local visitors and because even locals tend to travel a short distance by car rather than walking from their front door; it was therefore thought unlikely that the distribution of birds would show any correlation with housing locations.
- Managing access by local visitors is harder than access by tourists as they are less likely to respond to signs or seek guidance on where to go and what to do.
- Habitat management has changed over time, habitat quality is patchy and bird data are incomplete and sometimes inconsistent, making it harder to isolate the effects of development on bird populations.

Results of bird surveys and relationship to housing locations

4.34 Survey data for three Annex I bird species (Dartford warbler, nightjar and woodlark) were examined in relation to information about the distribution of their habitats, differences in management of those habitats and proximity of habitat areas to existing built development. The findings, which need to be interpreted with caution because of the patchy coverage of bird survey data, indicate that:

- The majority of the suitable (dry heathland) habitat for the Annex I bird species lies within 1 km of existing housing.
- No clear relationship existed between bird population density and habitat management for woodlark or nightjar; areas where winter burning is used as a heathland management tool support lower densities of Dartford warbler for seven years following burning.
- There is no evidence that the current distribution of birds is related to the current distribution of housing.

Summary and interpretation of results

4.35 The comparatively low densities of Annex I bird species within the New Forest SPA were flagged up by the earlier Footprint Ecology study [5]. This study sought to explain these by examining the potential effects of habitat management (particularly annual burning) and of recreational disturbance but was unable to provide such an explanation. The study concluded that existing data sets on birds and on habitat management are not adequate to determine why densities are low.

4.36 The report points out that most of the SPA's dry heath habitat is in relatively close proximity to housing, bringing nesting habitat and recreation together in the same locations. In the absence of any other explanation for the SPA's low densities of Annex I bird species, the study concludes that it is reasonable to suppose that the low densities may, at least in part, be due to recreation pressure. Although other factors, such as variations in habitat quality and habitat management, are likely to be contributing to low bird densities application of the precautionary principle is advised in line with the requirements of the Habitats Regulations until the evidence base is refined.

Implications for mitigation of recreation pressure

4.37 The argument above leads the report authors to conclude that the NPA should seek measures to mitigate the potentially significant recreational effects of development. Since recreational disturbance has multiple sources (visitors from within the National Park, day visitors from beyond the Park and overnight tourists from further afield) the NPA is advised to work with partners to seek proportionate contributions to mitigation measures from each source.

4.38 In discussing potential mitigation measures, the report finds little merit in establishing a development exclusion buffer zone around the New Forest's existing settlements such as the 400 m zone used for other heathland SPAs in southern England. This reflects, in part, the particular travel patterns of the New Forest's recreational users, as previously discussed. Instead, the report recommends that resources are pooled into a strategic mitigation scheme focused on people management and designed to complement the National Park's existing Recreation Management Strategy. Recommended elements of mitigation include:

- A survey of all parking locations within the National Park to inform management options.
- Heightened ranger presence at key locations during March-August to ensure responsible access.
- Promotion of routes for local residents away from sensitive areas, particularly during the bird breeding season.
- Management of pathways to influence visitor use.
- Community work to communicate issues to local residents.
- Reduction of disturbance around honey buzzard nest sites, for example by providing dedicated bird watching points.
- Further research to identify the factors determining distribution and abundance of Annex I bird species in the New Forest.

Biodiversity in the New Forest [9]

Introduction

4.39 This book has a large number of contributors and provides an overview of biodiversity in the New Forest, focusing on the current status and trends in species of conservation concern, and the habitats with which they are associated. A brief overview is also provided of current management approaches and future challenges. LUC has reviewed Chapter 20 which integrates this information to identify cross-cutting issues with the aim of informing future management decisions.

Evidence of recreational disturbance

4.40 Natural England's Common Standards Monitoring (CSM) approach has formed the basis of habitat monitoring in the New Forest since about the year 2000. Results indicate that 463 units out of 576 are in unfavourable condition (including 366 unfavourable recovering, 75 declining, 20 no change, and 1 partially and 1 totally destroyed); this represents 80% of units, or 68% of the total area. For those units for which data are available, the reasons for the condition being unfavourable provide an insight into the main threats currently affecting New Forest habitats. Results indicate that the threats differ between habitat types. In dry heathland and grassland habitats, the principal threat is overgrazing, although inappropriate scrub control is also a significant factor. In wet heathland, wet grassland and mire habitats, the principal threat is drainage. In woodland habitats, inappropriate forestry or woodland management practices are the principal threat, although drainage is also a significant factor accounting for unfavourable condition. In none of the habitats is public access or disturbance cited as a significant factor. For dry heathland and dry grassland habitat classified as in unfavourable condition, for instance, public access/disturbance was only cited as a reason for this condition in 0.72% of the area, with other reasons such as overgrazing (39.7%) and inappropriate scrub control (34.2%) far more

commonly cited. These observations need to be treated with some caution since factors other than disturbance may temporarily cause designated bird species to avoid otherwise suitable areas of habitat; as these factors are addressed and habitat condition improves, recreational disturbance may become apparent. A good monitoring protocol is needed to identify such situations.

4.41 Species monitoring is more patchy than habitat monitoring, with a number of authors in the book highlighting a lack of systematic survey and monitoring data, making it difficult to ascertain trends in abundance of individual species or species groups with any precision. Available evidence does suggest, however, that at least 170 species have been lost from the New Forest in recent decades. Again, a range of different causes of the decline or loss of species is identified. The widespread damage to ancient woodland habitats caused by forestry operations in the 20th century appears to have had a significant negative impact on groups such as vascular plants, fungi and some invertebrates. Another key issue has been the increase in grazing and browsing pressure in recent decades, particularly in the Inclosures, which accounts for the losses of many invertebrates, especially the Lepidoptera. In common with the assessment of habitat condition (see above), inappropriate habitat management interventions are widely cited, including scrub control, tree felling and heathland burning. The study also notes that the loss or decline of some species may be the result of processes occurring in the wider countryside, including agricultural intensification and land use change in areas adjacent to the New Forest. Causes for declines in bird species such as Dartford warbler, snipe, curlew and redshank are described as 'often unclear' and disturbance from human recreation is mentioned only as one of a range of factors which also includes inappropriate habitat management, climate change and nest predation.

4.42 Although there is overlap between the designated features of the New Forest's SSSIs and its European sites, it must be remembered that Natural England's condition assessments relate to SSSIs and caution should therefore be exercised in applying the conclusions above to the state of the habitats and populations of the European designations and the impact of recreational disturbance on these.

4.43 The book points out that that effective conservation management depends on adequate monitoring, so that management interventions can be amended and adapted in response to available evidence. Despite this, the current distribution of most species in the New Forest is inadequately known, and even less information is available regarding trends in abundance of individual species, even for those of international conservation concern for which the area was designated.

4.44 The conclusion in respect of recreation pressure is that "*Although there are clearly areas of concern in terms of recreation impacts on biodiversity, such as possible disturbance to ground-nesting birds, there is also a great deal of uncertainty regarding what the precise impacts actually are. Such uncertainty can only be addressed by an increased emphasis on research and monitoring in future.*"

Implications for mitigation of recreation pressure

4.45 The book does not seek to provide a detailed evaluation of management approaches to conservation management of the New Forest but some cross-cutting issues are briefly considered. The section on recreation notes that much of the evidence of recreational disturbance to wildlife is circumstantial, reports the findings of the PROGRESS project (reviewed separately in this report), and lends support to the New Forest NPA's Recreation Management Strategy. It concludes that "*it is surely appropriate that recreation management should continue to form a central element of any management plan for the New Forest"* whilst noting that restrictions on visitor movements or activities will inevitably be controversial, underlining the need for robust evidence to be gathered to support them. Whilst this conclusion of the study is valid in general terms, in the context of the Habitats Regulations, implementation of such restrictions may be justified even in the absence of robust evidence, on a precautionary basis.

The Solent Disturbance and Mitigation Project [10]

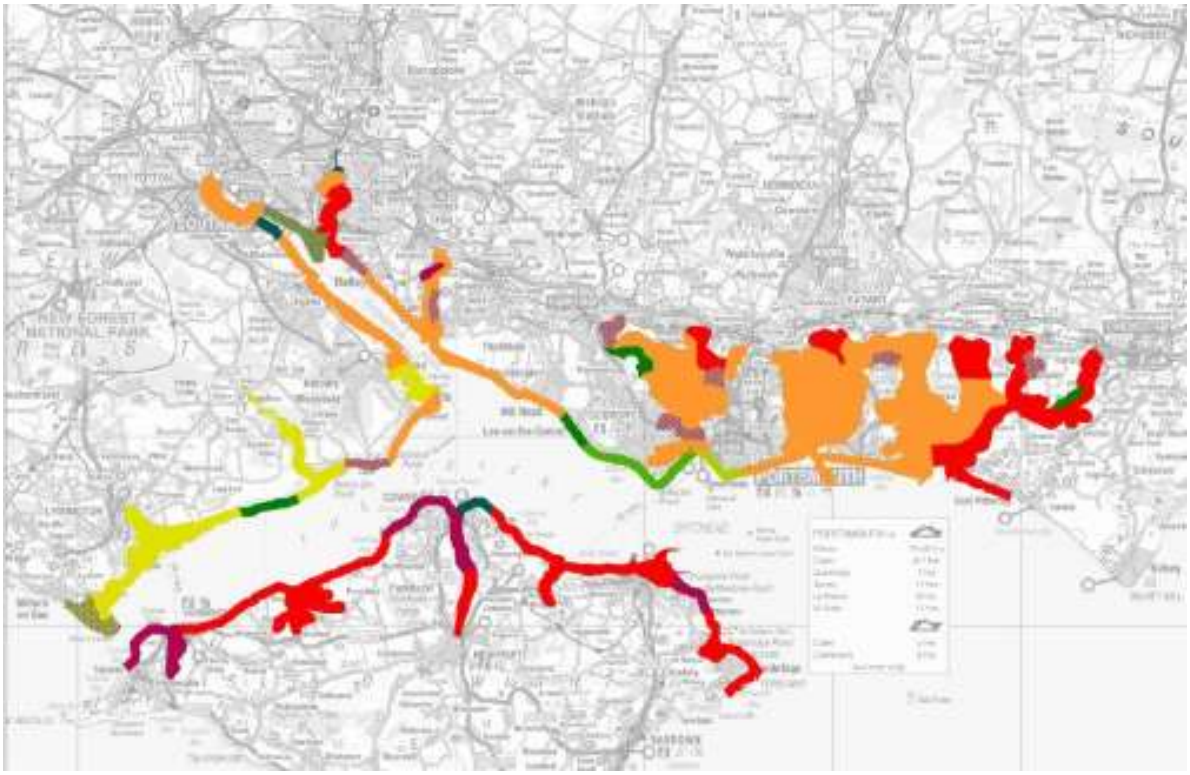
Introduction

4.46 The Solent Disturbance and Mitigation Project (SDMP) considers recreational disturbance to the wintering and passage waterfowl interest on the Solent shoreline between Hurst Castle and Chichester Harbour, including the north shoreline of the Isle of Wight. The study area is shown in Figure 4.1. Bird interest in the area of the SDMP study includes three sites designated as SPAs and Ramsar sites: Solent & Southampton Water, Chichester and Langstone Harbours and Portsmouth Harbour. The SPA/Ramsar coastline closest to New Forest District is part of Solent and Southampton Water SPA and Ramsar site; the part to the south of New Forest District on the Solent falls outside the Plan Area within the New Forest National Park whilst the part to the east of New Forest District in Southampton Water falls within the Plan Area. Phase I of the SDMP reviewed the issues and Phase II consisted of detailed fieldwork and modelling relating to bird disturbance.

Evidence of recreational disturbance

4.47 On-site fieldwork carried out in earlier stages of this project revealed that a wide range of recreational activities were causing disturbance. The visitor survey work and household survey revealed clear links between where people live and recreational use of sites. Using these data, the modelling component of the project found that disturbance resulted in the redistribution of birds and that the current housing and population levels were sufficient to reduce the survival of dunlin, ringed plover, oystercatcher and curlew within Southampton Water. Increased visitor numbers were predicted to further reduce the survival of dunlin and ringed plover and even if current visitor numbers were halved, mortality impacts were still predicted for oystercatcher and curlew. These findings from the modelling work consider the impact of disturbance in terms of bird mortality. It should be noted, however, that even if disturbance only resulted in marked redistribution of bird populations this would still represent a significant effect in HRA terms, since it would be contrary to site conservation objectives. The report concludes that without mitigation, the proposed levels of housing development set out within relevant local authorities' strategic plans will have a likely significant effect on wintering bird interest in the Solent sites.

Figure 4.1 Study area of Solent Disturbance and Mitigation Project [10]



Implications for mitigation of recreation pressure

4.48 The third and final phase of the SDMP therefore considers how best the local authorities around the Solent could mitigate the cumulative impacts of recreational disturbance associated with their plans. It identifies the mitigation measures that are capable of reducing disturbance impacts on wintering waterfowl; assesses the cost effectiveness and practicality of each; identifies which measures could be established rapidly, if required, and considers the practicalities of joint working across local authorities.

4.49 In summary, the following are considered to be the key elements of a mitigation package:

- Appointment of a delivery officer.
- Creation of a team of wardens / rangers.
- A coastal dog project.
- A review of parking.
- A review of watersports zones / watersports access.
- Creation of a 'codes of conduct' pack.
- A series of site-specific projects.
- Watersports permitting and related enforcement.
- Provision of SANGS / additional Green Infrastructure (GI) / alternative roost sites.

Peer review of the Solent Disturbance and Mitigation Project [11]

Introduction

4.50 Natural England commissioned ABP Marine Environmental Research to co-ordinate an independent scientific peer review of the SDMP to ensure advice provided to it is based on a robust and auditable evidence base. The report focused on the consideration of overwintering birds as this

was the main concern of the SDMP but this does not detract from the importance of breeding birds which are also recognised through the international environmental designations applied to the Solent.

Aims of peer review

4.51 The peer review sought to:

- Assess the robustness of the conclusions of the SDMP in relation to:
  - Existing and likely impacts of disturbance on the important bird populations of the SPAs in the Solent.
  - The contribution which residential development makes to the impacts.
- Assess whether the evidence base provides a robust basis for predicting the impacts of residential development on the important bird populations of the Solent SPAs.
- If it does not, assess what additional evidence would be required to do this.

Findings of the peer review

4.52 The peer review panel agreed that the evidence gathered by the SDMP provides greater understanding of visitor numbers and bird disturbance around the Solent and that the methodologies were generally appropriate, given the available resources. There were, however, a number of assumptions and limitations associated with all of the field data collected which have implications for the shorebird model and the degree of uncertainty that surrounds the outputs. (N.B. The 'shorebird model' used the primary data collected to predict whether disturbance may be reducing the survival of birds using the Solent coastline both now and under future housing development scenarios.)

4.53 It was concluded that the predictions of the shorebird model are likely to be over-estimating the current level of bird disturbance, and the associated impacts for bird fitness at the scale of the Solent as a whole. The review panel also had reservations about drawing conclusions from the shorebird model for individual sections of the study area as site-specific issues would require greater consideration than was possible within the model.

4.54 Similarly, in terms of the predicted impacts of bird disturbance under future scenarios, the panel were generally (although not wholly) of the opinion that these were likely to be precautionary at the scale of the Solent as a whole. This was because the limitations and the uncertainties introduced through the assumptions of the shorebird model would be further exacerbated by the uncertainty surrounding how each of the potentially relevant parameters around the Solent will change in the coming decades.

4.55 The report concludes that since the peer review panel considered that it was not possible to draw firm quantitative conclusions from the shorebird model with regard to increased disturbance from future housing developments, the outputs of the shorebird model alone may not be sufficient to meet the requirements of formal scrutiny as part of an Environmental Impact Assessment or a Habitat Regulations Appraisal. The panel suggested that all future housing developments may be required to provide an evidence based approach to defining the potential impacts associated with the respective schemes. The review panel considered it may therefore be possible to generate some guiding principles to be applied in the monitoring and assessment of individual housing developments. These could build upon the methods employed to collate the empirical evidence for the SDMP work but with refinements made that are based on the recommendations arising from the peer review. The peer review panel suggested that the SDMP outputs may also help to inform the requirements for mitigation and management measures for bird disturbance both currently and in the future should these be required.

Implications for mitigation of recreation pressure

4.56 The SDMP identified likely significant recreational effects on the SPA sites of the Solent from the combined effects of local authorities' planned levels of housing development. The peer review of that project concluded that a number of the project conclusions were over-precautionary and cast

doubt on the use of project outputs to provide sufficient evidence for HRA. Some problems with the peer review itself have been identified by Professor Rhys Green of the RSPB [12] and by the authors of the SDMP [13]. Both of these documents were considered by Natural England in producing their final advice on Phase II of the SDMP in May 2013 [14].

4.57 LUC has relied on Natural England's advice letter which states that:

"…the SDMP work represents the best available evidence, and therefore avoidance measures are required in order to ensure a significant effect, in combination, arising from new housing development around the Solent, is avoided."

Access patterns in south east Dorset [15]

Introduction

4.58 This report considers how different factors influence visitor rates to heathlands in south-east Dorset. It focuses on the extent to which the presence or extent of different types of habitat and existing green space in the vicinity of where people live determine the amounts of visits people make to the Dorset Heaths.

4.59 The primary data on visitor behaviour come from a household survey of south-east Dorset residents conducted in 2008, details of which are presented in a separate report [16]. Preliminary statistical analysis was used to identify a number of factors that influence the number or likelihood of visits made to the Dorset Heaths by individual households. A model was then constructed to predict the annual number of heath visits made per household, based on particular combinations of the factors with the greatest influence on heath visits.

Key findings

4.60 The total area of the existing network of green space (farmland, parks, gardens and other types) surrounding a postcode makes no significant difference to the amount of visits people make to the Dorset Heaths but the number of such green spaces did have a significant effect.

4.61 The amount of nearby (within 3 km of home postcode) coast is associated with a reduction in heath visits provided that there is no heath nearby (within 1.5 km of home postcode).

4.62 Similar numbers of visits to the Dorset Heaths are made by people travelling by car as by those travelling on foot. Foot visitors are particularly likely to live within 1.5 km of heathland whilst those travelling by car are particularly likely to live in a 1.5-5.0 km distance band.

4.63 Dog walkers make 2.4 times as many visits to green space as non dog-walkers. The ratio of dog owners to non dog-owners is greatest for heaths, to which dog-owning households make over four times as many visits both on foot and by car.

4.64 For people who live well away from heaths, those who live in flats tend to visit heaths less frequently than those living in houses.

Implications for mitigation of recreation pressure

4.65 The results suggest that the quality, number and possibly the variety of other green space is an important factor in whether it will deflect heath visits. Green space that provides a similar experience to heaths or is coastal may be particularly effective in deflecting heath visits.

4.66 The relatively high proportion of people visiting the Dorset Heaths on foot and the distance bands associated with foot and car visitors lend support to the current zoning policies (no new residential development within 400 m of SPA / SAC and developer contributions per dwelling within 400 m – 5000 m).

4.67 There is a need for research to test the effectiveness of SANGS, with before and after monitoring of the SANGS and the adjacent heathland sites. Further work is also needed to study people's perception of the quality and attractiveness of sites to help improve understanding and predictive modelling of visitor rates.

4.68 Although interesting, the relevance of this study to an understanding of the likely effectiveness of SANGS in deflecting visitors to the New Forest or Solent Natura 2000 sites is limited for two reasons. Firstly, the study looked at the effect on heath visits of proximity to all types of green space, most of which are not designed with the intention of attracting people that would otherwise visit heaths. Secondly, as other reports reviewed here have concluded, it is essential that mitigation takes account of the characteristics of the particular site at which recreational effects are to be addressed. The New Forest, for example is much larger and less fragmented than the Dorset Heaths, and draws many of its visitors from much further afield.

Test Valley Forest Park feasibility study [17]

Introduction

4.69 This report was commissioned by Test Valley Borough Council to assess the feasibility of establishing a new forest park in the south of the borough.

4.70 The Appropriate Assessment of the Draft South East Plan, as well as those for the Test Valley Borough Council Core Strategy, and that for the neighbouring Southampton City Council Core Strategy, all identified the potential for residential development and population growth to lead to increased visitor pressures in the New Forest, with a potential for likely significant effects on its European nature conservation interests. To seek to mitigate these potential effects, the amended South East Plan, supported by a draft Green Infrastructure Strategy for South Hampshire and supported by Natural England, proposed the provision of alternative natural green space of sufficient scale and suitably located to absorb visitor pressures on the New Forest. To this end, Test Valley Borough Council has identified almost 400 hectares of woodland and commercial forest in the south of the borough as a potential forest park. Policies for provision of this forest park are included in its Core Strategy (submitted but then withdrawn in 2009) and draft Revised Local Plan (published for consultation in 2013).

Key attributes necessary for the forest park

4.71 The feasibility study reviews other studies of current patterns of visitors to English National Parks [18] [19], and to the New Forest National Park in particular [4] [6], to identify the attributes that make these parks attractive to visitors. The proposed forest park is then evaluated against these attributes to assess its likely success as an alternative visitor destination to the New Forest. The following critical success factors were identified for the proposed forest park:

- **Location and Accessibility** – including the location of the proposed site in relation to the target catchment, and the ease of accessing the site by different modes of transport.
- **Size and Capacity** – the proposed site needs to be sufficiently large and robust to accommodate the likely visitor numbers required to mitigate the effects of population growth from new residential development.
- **Ambience** – this relates to the atmosphere, character and environmental attributes of the proposed site, and how they compare to the New Forest experience based on the characteristics most valued by visitors, including scenery, landscape and views, peace and quiet and wildlife diversity.

4.72 The evaluation found that the proposed forest park performed well against all of these success factors. It therefore concluded that the site can provide a viable alternative to visits to the New Forest and provide a valuable new green space for local communities between Romsey, Eastleigh and Southampton, given the right investment and management.

Growth in visitors to the New Forest National Park and capacity of the forest park

4.73 The forest park feasibility study has used the following methods of estimating of growth in visitors to the New Forest National Park and the capacity of the proposed forest park to accommodate visitors which could potentially be applied to New Forest District:

Number of visitors attracted to proposed forest park

Actual visits to Itchen Valley Country Park (Eastleigh Borough) per hectare of park per annum = 1,222

Actual visits to Manor Farm Country Park (Eastleigh Borough) per hectare of park per annum = 1,173

Estimate of potential number of visitors attracted to proposed forest park: 400 hectares x 1,000 visitors per hectare per annum = 400,000 visits per annum

Additional visits by Test Valley residents to New Forest

(A): New Forest National Park total visitor days per annum = 13,345,400 [4]

(B): Proportion of New Forest visits by Test Valley residents = 2.6% [4]

(C) = (A) x (B): 13,345,400 x 2.6% = 347,000 visits per annum to New Forest by Test Valley residents

(D): Current population of Test Valley = 112,000

(E) = (C) ÷ (D): 347,000 ÷ 112,000 = 3.1 visits to New Forest per Test Valley resident per annum

(F): Net population growth in Test Valley by 2026 = 8,360

(G) = (E) x (F): 3.1 x 8,360 = **25,916 additional visits per annum** in 2026 to New Forest National Park from Test Valley (an increase of approximately 0.2% on the existing 13.345 million visits per annum).

4.74 Based on detailed analysis of the questionnaire surveys completed by Test Valley residents as part of the New Forest visitor survey [4], the feasibility study determined that 98.69% of Test Valley residents surveyed were day visitors to the New Forest rather than staying tourists. Thus, almost all of the additional visits per annum are likely to be day visits, the type of visit which provision of a forest park is intended to divert.

Additional visits by Hampshire (excluding New Forest) residents to New Forest: Estimate 1 based on official projections of population growth

4.75 The first method of estimating the additional visitors to the New Forest from Hampshire residents (excluding New Forest District and New Forest National Park residents) is the same as that set out for Test Valley Borough above.

(A): Officially projected population growth for each Hampshire district 2006-2026

(B): Visits per head for each Hampshire district = Total visits from Hampshire district [4] ÷ Population of that area (2006)

(C) = (A) x (B): Visits per head x population growth = increase in visits to New Forest

4.76 The study estimates visitor growth during 2006-2026 separately for each Hampshire district: total for all of Hampshire, excluding New Forest District and the National Park is **177,000 additional visits per annum** in 2026 (approximately 1.3% increase on existing visits).

Additional visits by Hampshire residents to New Forest: Estimate 2 based on Footprint Ecology method

4.77 The second method of estimating the additional visitors to the New Forest National Park from Hampshire residents (excluding New Forest District and New Forest National Park residents) is the same as that employed by Footprint Ecology [5]. Thus, the planned housing growth for each district is multiplied by the current number of persons per dwelling (2.36) to give an estimated population increase for each district. These population increases are then multiplied by the visits per head for each district (as calculated above) to give the estimated increase in visits to the New Forest for each district.

4.78 Using the Footprint Ecology method, the study estimates growth in numbers of annual visitors to the New Forest from 2006 to 2026 as being 65,000 for Test Valley; 246,000 for Test Valley,

Southampton and Eastleigh combined and **432,000 additional visits per annum** (approximately 3.2% increase on existing visits) for all of Hampshire (excluding New Forest District and New Forest National Park).

4.79 Based on the calculations above, alternative green space in Hampshire would need to attract and accommodate between 177,000 and 432,000 additional visits by 2026, in order to offset the impact of proposed residential development and population growth on the New Forest over the 20 year period 2006 to 2026.

Implications for mitigation of recreation pressure

4.80 The study is of interest to the HRA of the New Forest District Council Sites and Development Management Policies DPD for several reasons. Firstly, it provides a generic understanding of the attributes necessary if SANGS are to help mitigate visitor pressure on the New Forest Natura 2000 sites. Secondly, although the forest park is most likely to attract visitors from Romsey, Eastleigh and Southampton (these three settlements are arranged in a triangle around the forest park), its location approximately 4 km to the north east of Totton suggests that it may have some, albeit limited, potential to also attract some visitors from the Totton area who might otherwise visit the New Forest National Park. (Note: Table 21 of the New Forest Visitor Survey [4] found that 12% of 'All day visitors from home', and 28% of 'Other day visitors' from home to the New Forest National Park were from Southampton, Eastleigh and Chandlers Ford.) Finally, it sets out a number of approaches for quantifying the numbers of additional visits to the New Forest that might be expected from population growth and / or residential development in Test Valley Borough and compares these to the potential visitor capacity of the proposed forest park.

Feasibility study for a forest park in south west Hampshire [20]

Introduction

4.81 This Forestry Commission Report (2011) developed the initial work undertaken by Test Valley Borough Council [17] to produce a more detailed feasibility study. It forms part of the evidence base for the revised Test Valley Local Plan [21] which proposes the forest park in Policy LHW3. It is also intended to inform implementation of the Partnership for Urban South Hampshire (PUSH) Green Infrastructure Strategy [22].

Objective of the proposed forest park

4.82 "*To attract at least 246,000 visits each year (by 2026) from the population of Test Valley, Eastleigh and Southampton combined, which might otherwise travel to the New Forest National Park for outdoor recreation.*"

4.83 It is anticipated that the preferred option for the forest park (see below) will mitigate the potential effects of residential development in the area whilst ensuring the continued sustainable management of the woodlands. Other forest parks will need to be provided elsewhere in Hampshire in order to attract new residents from outside the study area that might otherwise travel to the New Forest. This forest park will not be designed to intercept people travelling southward on the M27 that are bound for a day out in the New Forest National Park.

Options considered and preferred option

4.84 Various options were considered in relation to four elements of the proposed forest park:

- **Scope**: The visitor capacity of the forest park – preferred option is 340,000 visitors per annum i.e. more than the 246,000 additional visitors per annum estimated as arising from planned development in Test Valley, Southampton and Eastleigh during 2006-2026 [17].
- **Solution**: Location of key assets to be developed – preferred option is to develop a visitor centre, 200 space car park and trails in Lords Wood + 100 space car park and trails in Hut Wood + 10-40 space car park and trail in other woods.

- **Delivery**: Means of assembling required land – preferred option is that landowners sell woodlands to the Council/ PUSH/ Forestry Commission.
- **Implementation**: Phasing of solution – preferred option is to install visitor facilities in multiple phases to December 2026.

Ensuring a viable alternative to the New Forest

4.85 The study sets out a strategy that is designed to ensure the forest park provides a high quality outdoor destination which is considered a viable alternative to the New Forest as a place for outdoor recreation. Key elements of this strategy are:

- **Woodlands** – Woodlands have the ability to absorb many more people than an open landscape without seeming to be crowded; 484 hectares of woodland will be included in the forest park.
- **Zoning** - Access points and zones targeted at different user groups with a central visitor area and visitor centre plus areas for walking, cycling and motorcycling.
- **Day visitors** – The forest park seeks to attract day visitors who are likely to live within 10 km who would typically travel to the New Forest for outdoor recreation and are looking to spend between 2 and 6 hours in a woodland. Features designed to attract this group include a well-managed car park of sufficient size to accommodate projected visitor numbers and a visitor centre that functions as a central arrival point that enables visitors to orientate themselves before setting off into the wider woodland and provides facilities such as visitor information, toilets, refreshments and children's woodland play and activity trails.
- **Short stay visitors** – The forest park seeks to attract people who live within 5 km who are typically dog walkers and are looking to spend between 30 minutes and 2 hours in a choice of woodlands. Features designed to attract this target group include a choice of woodlands close to home, each with associated trails and short stay car parks.
- **Improved access** – As well as the managed car parks described above, the strategy includes waymarked woodland trails, a family cycle trail, horse riding trails and extension of existing local authority cycle routes and bridleways to connect the forest park into the wider rights of way network.
- **Woodland management** - The car parks, buildings and trails proposed by this study will sit within woodlands that are currently sustainably managed by the Forestry Commission under the lease restrictions of the landowners. It is likely that the freehold interest will need to be purchased from the landowners concerned, providing opportunities to improve the woodlands for people, wildlife, landscape and heritage.

Implications for mitigation of recreation pressure

4.86 Elements of the study which are of particular interest to the HRA of the Sites and Development Management DPD are the locations the forest park is intended to provide mitigation for and the elements of the forest park strategy that are intended to make it a viable alternative to visiting the New Forest for outdoor recreation.

Guidelines for the creation of Suitable Alternative Natural Green Space (SANGS) for Thames Basin Heaths [23]

4.87 Natural England has produced these guidelines which describe the features which have been found to draw visitors to the Thames Basin Heaths SPA. It provides guidelines on the type of site which should be identified as SANGS for the Thames Basin Heaths and measures which can be taken to enhance sites so that they may be used as SANGS. The checklist for a suite of SANGS is reproduced in full below:

Site Quality Checklist – for a suite of SANGS for the Thames Basin Heaths SPA

4.88 Requirements referred to as "must" are essential in all SANGS

4.89 Those requirements referred to as "should haves" should all be represented within the suite of SANGS, but do not all have to be represented in every site.

4.90 All SANGS should have at least one of the "desirable" features.

Must haves

- For all sites larger than 4ha there must be adequate parking for visitors, unless the site is intended for local use, i.e. within easy walking distance (400m) of the developments linked to it. The amount of car parking space should be determined by the anticipated use of the site and reflect the visitor catchment of both the SANGS and the SPA.
- It should be possible to complete a circular walk of 2.3-2.5km around the SANGS.
- Car parks must be easily and safely accessible by car and should be clearly sign posted.
- The accessibility of the site must include access points appropriate for the particular visitor use the SANGS is intended to cater for.
- The SANGS must have a safe route of access on foot from the nearest car park and/or footpath/s
- All SANGS with car parks must have a circular walk which starts and finishes at the car park.
- SANGS must be designed so that they are perceived to be safe by users; they must not have tree and scrub cover along parts of the walking routes
- Paths must be easily used and well maintained but most should remain unsurfaced to avoid the site becoming too urban in feel.
- SANGS must be perceived as semi-natural spaces with little intrusion of artificial structures, except in the immediate vicinity of car parks. Visually-sensitive way-markers and some benches are acceptable.
- All SANGS larger than 12 ha must aim to provide a variety of habitats for users to experience.
- Access within the SANGS must be largely unrestricted with plenty of space provided where it is possible for dogs to exercise freely and safely off lead.
- SANGS must be free from unpleasant intrusions (e.g. sewage treatment works smells etc.).

Should haves

- SANGS should be clearly sign-posted or advertised in some way.
- SANGS should have leaflets and/or websites advertising their location to potential users. It would be desirable for leaflets to be distributed to new homes in the area and be made available at entrance points and car parks.

Desirable

- It would be desirable for an owner to be able to take dogs from the car park to the SANGS safely off the lead.
- Where possible it is desirable to choose sites with a gently undulating topography for SANGS
- It is desirable for access points to have signage outlining the layout of the SANGS and the routes available to visitors.
- It is desirable that SANGS provide a naturalistic space with areas of open (non-wooded) countryside and areas of dense and scattered trees and shrubs. The provision of open water on part, but not the majority of sites is desirable.
- Where possible it is desirable to have a focal point such as a view point, monument etc. within the SANGS.

Implications for mitigation of recreation pressure

4.91 The above guidelines have been specifically designed to mitigate development-related recreational pressure on the Thames Basin Heaths SPA. The Thames Basin Heaths SPA has some similarities to the New Forest National Park and/or SPA, notably its 'heathy' character with a mixture of heathland, mire, and woodland habitats; the fact that most visitors (more than 83%) arrive by car; and its popularity with dog walkers. However, it also has some very significant differences. While the Thames Basin Heaths provide recreation for local people, the New Forest National Park is a national recreational resource which draws visitors from much further afield and which offers a larger scale and more varied range of landscapes and recreational experience. Furthermore the New Forest European sites provide a larger (more than three times the area) and much less fragmented area of habitat than the Thames Basin Heaths SPA. Finally, the New Forest National Park has a more developed system of habitat and visitor management than Thames Basin Heaths SPA. These important differences mean that whilst the Natural England publication can provide some appropriate guidance to consider in the context of designing SANGS for the New Forest SPA, it limits the extent to which it can be directly transferred to the New Forest SPA context.

Open Space, Sport and Recreation Study for the New Forest Area [24]

4.92 The Core Strategy cites this Planning Policy Guidance Note 17 (PPG17) Study as the basis of the 3.5 ha public open space standard contained in policy CS7, which includes 2.0 ha per thousand population of 'informal open space'. This review summarises the process used to arrive at a standard of provision for this 'informal open space' as well as key messages about use of existing open spaces. Note that the PPG17 Study covered both the National Park and New Forest District but where possible, the information below focuses on New Forest District excluding the National Park.

Use of existing open spaces

4.93 A 'Citizen's Panel', comprising a representative sample of New Forest (including the National Park) residents, was surveyed to assess resident usage and opinions of open spaces, sports and recreational facilities. Key messages from the survey are as follows.

Type of open space used most often

4.94 When asked which type of outdoor facility they used most often, the one identified by the highest proportion of respondents was the New Forest National Park (18%), followed by recreation/play parks (14%), beach/coastal areas (11%), nature/wildlife areas (7%), fields/common land (6%), cycle or footpaths (5%) and sports pitches or golf courses (5%). Many other respondents named individual sites/locations for which the type could not be readily discerned.

Reasons for using most often used open space

4.95 The most frequently cited reasons given by respondents for using their most frequently visited open space were walking (62%), enjoying nature/wildlife (56%). The next most popular reasons were to sit, relax or picnic (38%), to walk a dog (28%), to socialise/meet friends (27%), to jog/take exercise (21%), to play informally (18%), to visit a play area (15%), to use as a through route (15%), to cycle (12%) and to attend events or festivals (11%). Younger people, especially those aged under 25, tended to use sports and facilities for their age group more frequently, but did not make as much use of natural facilities compared to older people.

Frequency of use of most often used open space

4.96 The majority of respondents reported using their most often used open space either daily (27%) or weekly (28%) with a further 34% using it at least monthly. Those residing in the SO42 (Beaulieu) and SO43 (Lyndhurst) areas (both within the National Park) used their most often used open space more frequently than respondents residing in other parts of the district.

Distance from home of most frequently used open space

4.97 Considering the distance travelled to their most frequently used open space, over half used an outdoor facility under one mile from their home, with the average distance being 1.6 miles. 46% used an area less than 800 m from their homes and 34% less than 400 m. Those residing in the SO42 and SO43 postcode areas (both within the National Park) were found to have open spaces closest to their homes, perhaps explaining their high usage.

Visiting other local open spaces within New Forest district

4.98 Just over half of adults (57%) reported using outdoor spaces within the New Forest district other than their most frequently used one. The most commonly identified were the New Forest National Park, Wiverley, Lepe, Lyndhurst, Calshot, Barton-on-sea, Woodside, Hatchett and Beaulieu. These are used between 26 and 43 times a year on average. Those aged under 45 years (also parents) and those with a car were found to visit other local spaces more than others.

Visiting open spaces outside New Forest district

4.99 Just over a third of adults (39%) reported using outdoor spaces outside the New Forest district on a regular basis. The most common were Southampton parks, Moors Valley Country Park and Hengistbury Head. These are used between 12 and 27 times a year on average, perhaps reflecting the greater distance or specialist nature of these facilities. Again, those aged under 45 years (also parents) and those with a car were found to visit this category of open spaces more than other demographic groups.

Most important issues for users of open space

4.100 The issues of safety and security (56%), and cleanliness (49%) were thought most important for areas of outdoor space. Being easy to get to (44%), the control of anti-social behaviour (37%) and of dogs (37%), and good maintenance (29%) were also believed important. Good foot/cycle path links (21%), on-site supervision (13%), ease of getting around sites (12%) and signposting and information (9%) were of lesser importance.

Definition of informal open space

4.101 The study proposed a typology for open space based on the primary purpose of open space sites within the district rather than rigid adherence to the PPG17 recommended typology.

4.102 One element within this typology, informal open space, is the focus of this note and is defined as including:

- Amenity open space – spaces open to free and spontaneous use by the public but neither laid out or managed for a specific function (e.g. public recreation ground) nor managed as natural/semi-natural habitat, for example informal grassed areas in housing estates.
- Natural green space – for example country parks, nature reserves, meadows, river plain, lakes/water features, and woodland and copses.
- Parks and gardens – which can embrace a wide range of functions including informal recreation, formal and informal play space, attractive walks, landscape and amenity features and areas for events.

Informal open space - existing provision

4.103 Table 4.1 sets out relevant extracts from the PPG17 Study's audit of the levels of provision of existing open space in the district for all typologies taken together and for informal open space. Provision of informal open space is relatively high in the Coastal Sub Area, mostly due to inclusion of large, natural areas such as Pennington Common, Barton Cliff Top and Barton Common, Studland Common, Hordle Cliffs, the Pleasure Grounds and Sturt Pond in Milford on Sea. The Totton and Waterside Sub Area is also well provided for due, again, to some large natural areas and the considerable amounts of woodland swathes in Hythe and Dibden. The Avon Valley and Fordingbridge and North West Parishes Sub Areas have relatively low levels of informal open space, being generally more rural and with greater perceived or actual access to the countryside. The 'Open Forest' was excluded from estimates of existing provision of informal open space.

4.104 The quality of existing open space varies greatly, as described in the parish profiles within the PPG17 Study report.

Table 4.1 PPG17 Study data on existing open space provision New Forest District (ex. National Park)

Sub area	Parish	Population 2001	Informal open space		All open space	
			Area of open space (ha)	Area (ha) per 1,000 population	Area of open space (ha)	Area (ha) per 1,000 population
AV	Bransgore	4,331	1.16	0.27	7.95	1.83
AV	Ellingham, Harbridge & Ibsley	1,164	0.00	0.00	2.81	2.41
AV	Ringwood	13,589	10.46	0.77	19.70	1.45
AV	Sopley	774	0.99	1.28	0.99	1.28
AV Total		**19,858**	**12.62**	**0.64**	**31.46**	**1.58**
C	Hordle	5,095	6.31	1.24	14.38	2.82
C	Lymington & Pennington	14,329	56.10	3.92	69.09	4.82
C	Milford-on-Sea	4,703	41.79	8.89	44.84	9.54
C	New Milton	23,753	56.78	2.39	85.27	3.59
C Total		**47,880**	**160.99**	**3.36**	**213.59**	**4.46**
FNW	Breamore	365	0.00	0.00	0.89	2.45
FNW	Damerham	515	0.00	0.00	1.75	3.40
FNW	Fordingbridge	5,682	7.35	1.29	12.04	2.12
FNW	Martin	398	0.00	0.00	0.66	1.67
FNW	Rockbourne	322	0.00	0.00	2.43	7.53
FNW	Sandleheath	665	1.81	2.72	1.81	2.72
FNW	Whitsbury	183	0.00	0.00	0.00	0.00
FNW Total		**8,130**	**9.15**	**1.13**	**19.58**	**2.41**
TW	Fawley	14,334	42.82	2.99	70.05	4.89
TW	Hythe & Dibden	19,935	58.14	2.92	71.26	3.57
TW	Marchwood	5,586	11.70	2.09	14.71	2.63
TW	Totton & Ealing	28,000	56.50	2.02	82.54	2.95
TW Total		**67,855**	**169.15**	**2.49**	**238.56**	**3.52**
Grand Total		**143,723**	**351.91**	**2.45**	**503.19**	**3.50**

Sub areas: AV: Avon Valley; C: Coastal: FNW: Fordingbridge & North West Parishes; TW: Totton & Waterside

Informal open space – standards of provision

Hierarchy of informal open space

4.105 In the absence of any existing local standard for informal open space, the PPG17 Study proposed local quantitative and accessibility standards, loosely based on the Natural England Accessible Natural Greenspace Standard (ANGSt) guidance. ANGSt guidance calls for provision of natural green space according to a tiered system within which sites of different sizes are provided to improve accessibility:

- No person should live more than 300 m from their area of natural green space.
- There should be at one accessible 20 ha site within 2 km from home.
- There should be one accessible 100 ha site within 5 km.
- There should be one accessible 500 ha site within 10 km.

4.106 The local hierarchy of informal open space proposed by the PPG17 Study for the New Forest area (including the National Park) is reproduced in Table 4.2.

Table 4.2 Hierarchy of informal open space for New Forest suggested by PPG17 Study

Type	Accessibility Standard	Description
Country Parks	Catchment of c. 15 minutes driving time	Country Parks such as the one existing one within the study area at Lepe
Natural informal open space sites (district wide)	Catchment of c. 15 minutes driving time	Commons, lakeside areas
Natural informal open space sites (local)	Catchment of c. 15 minutes driving or walking time	Natural areas adjacent to and within built up areas
District Parks	Catchment of c. 10 minutes driving or walking time	Typically > 5 ha, multifunctional informal & formal uses
Town Parks/Village Recreation Grounds	Catchment of c. 10 minutes walking time (480 m straight line distance)	Typically >1.5ha, multifunctional informal & formal uses
Community Parks	Catchment of c. 10 minutes walking time	Typically >0.25ha, to meet local needs – multifunctional
Mini Parks/Other Small Areas of Open Space	Catchment of c. 5 minutes walking time (240 m straight line distance)	Informal recreation; typically >0.25ha
Routeways and Green Corridors	N/A	To link open space and recreation facilities

4.107 The PPG17 Study states that in order to support development of the hierarchy of informal open space shown in Table 4.2 and meet identified deficiencies there is a need for more informal open space in the New Forest area, in particular:

- Country Park: more country parks in the area to supplement the one existing one at Lepe. This could help to relieve pressures on the Forest arising from existing population and anticipated increases in nearby sub-regional populations and preferably be provided through joint working arrangements with the neighbouring Hampshire and Dorset. Areas of search for a suitable site include the whole of Dibden Bay, Tavells Lane and the area north of Marchwood, the north and east of the New Forest area and sites bordering Christchurch/East Dorset in the south west.
- Areas of informal, amenity open space of at least 0.25 ha in size within the urban areas of the main towns, especially, Ringwood, Hordle, Lymington, Milford-on-Sea, New Milton, Fawley and Totton and Eling and some villages.
- Areas of informal open space to contribute towards additional or improved spaces in parks and recreation grounds, alongside pitches and other more formal provision.

Quantitative standards for informal open space

4.108 A quantitative standard for open space in the New Forest is arrived at by estimating the total additional open space required to achieve the hierarchy in Table 4.2, adding this to the existing provision of informal open space and then dividing by the existing population (2001 census figure) to give a minimum standard for total provision across the New Forest (including the National Park) in the long term as well as the standard for provision alongside new housing development. The calculation is as follows:

Total existing informal open space:	359.0 ha
Space required for one additional country park (based on size threshold suggested by English Nature):	20.0 ha
'Approximate but reasonable' estimated requirement of another 50 informal open spaces of 0.25 ha and 10 areas of 0.5 ha in the main towns, especially Ringwood, Hordle, Lymington, Milford-on-Sea, New Milton, Fawley and Totton and Eling and the several villages which have no such areas in size	17.5 ha

(e.g. Bransgore, Brockenhurst, Burley, Lyndhurst):	
Total informal open space requirement: 359.0 + 20.0 + 17.5 =	396.5 ha
Divided by existing population (169,331): 396.5/169,331 =	**2.3 ha per thousand** people

4.109 This minimum standard of 2.3 ha of informal public open space per thousand compares to existing, audited provision of 2.12 ha per thousand across the study area as a whole (New Forest National Park plus New Forest District). Whilst New Forest District outside of the National Park already exceeds this standard as a whole, some parishes and sub-areas in the District fall significantly below this level of provision (see Table 4.1). The PPG17 Study notes, however, that the more rural parishes within the New Forest National Park itself and the north west of the New Forest District will struggle to obtain 2.3 ha of informal open space per thousand and that 1.0 ha per thousand may be a more realistic and deliverable standard in these areas.

Qualitative criteria for informal open space

4.110 The quality of informal open space should be guided by the key considerations arising from the Survey consultation, focusing on:

- Safety and security of sites.
- Cleanliness and freedom from litter and graffiti.
- Easy accessibility to and around open space sites and facilities for all members of the community.
- Control of dogs.
- High standard of facility provision and maintenance.
- High standard of information provision.

Quantitative standard for all types of open space

4.111 In addition to the quantity standard of 2.3 ha per thousand for informal open space, the PPG17 Study also recommended standards of 1.25 per thousand for outdoor sport facilities, 0.20 ha per thousand of space for children and young people and 0.30 ha per thousand of allotments, giving a total suggested standard of approximately 4.0 ha per thousand people.

4.112 In adopting the new public open space standard in the Core Strategy, the elements recommended by the PPG17 study consultants relating to country park and allotment provision were removed from the public open space standard. The inclusion of provision for an additional country park was not considered deliverable within the Plan Area because of a lack of suitable opportunities to create such a facility. Allotment provision was also omitted from the public open space standard, and as it was considered more appropriately dealt with on a local need/demand basis, rather than a universally applied standard.

Implications for mitigation of recreation pressure

4.113 The PPG17 Study provides important information about how and why residents use existing accessible open space in New Forest District. Although not relating specifically to open space designed to mitigate recreation pressure on European sites it can nevertheless be used to help ensure that new open space provided alongside development is attractive to residents who might otherwise visit European sites more frequently. In addition, it provides an objective assessment of how much accessible open space of different types is required to meet the needs of New Forest (including the National Park) residents and how this should be arranged in a hierarchy of sizes to increase accessibility.

4.114 The PPG17 Study did not consider the issue of recreation pressure on the New Forest or Solent Coast European sites and it is unclear whether the need to avoid such pressure would have increased the recommended levels of open space provision and if so, by how much.

5 Likely recreation effects of proposed development

The New Forest European sites

5.1 New Forest District Council reports that the levels of development within the Plan Area, as established in the adopted Core Strategy, represent a significant reduction from past levels of residential development within the Plan Area and development rates will continue to fall over the duration of the Plan. The reduction in development rates is a key factor in the planning strategy for the area which recognises that the European sites are best protected by avoiding unacceptable levels of development which can cause harmful impacts to them. However, as established in the Core Strategy, and notwithstanding the possibility of some harmful impacts on European sites within and adjoining the Plan Area, some development is planned to meet local needs. The potentially harmful impacts of this development, principally the recreational impacts arising from additional housing development, are being assessed and addressed through the HRA of the Local Plan.

5.2 In respect of the New Forest European sites, the best available evidence on recreation pressure is inconclusive. Whilst a significant amount of information has been gathered about the large number of visitors to the New Forest National Park, little is known about visitors to the European sites within its boundary. Also, whilst it is known that population densities of designated bird species within the New Forest SPA are unexpectedly low, studies have been unable to explain this or link this to visitor patterns, and some evidence suggests that habitat management practices may be having a greater influence than recreation. It is clear however, that the New Forest SPA is in relatively close proximity to existing and planned housing in New Forest District, including that within the National Park itself (see Figure 3.2). Information on recreational visits to the New Forest SPA is lacking but that for the New Forest National Park suggests that the risk of residential development in New Forest District leading to increased visitor pressure on the New Forest SPA cannot be ruled out. Although other factors, such as variations in habitat quality and habitat management, are likely to be contributing to low bird densities, a precautionary approach is appropriate in line with the requirements of the Habitats Regulations until the evidence base is refined.

5.3 This leads LUC to conclude that likely significant effects associated with recreation from planned residential development in New Forest District cannot be ruled out and that mitigation is therefore required. The elements of an appropriate strategy to mitigate the effects of New Forest District's residential development on the New Forest European sites are discussed in the next Section of this report.

Scale of recreational effects on New Forest European sites

5.4 Having concluded that mitigation will be necessary to avoid likely significant effects on the European sites of the New Forest, this Section attempts to quantify the scale of additional visitor pressure that might be expected as a result of the amount of residential development proposed in the NFDC Local Plan Part 2.

Calculation 1: Estimated proportion of visits by NFDC residents to New Forest National Park that are to New Forest European sites

5.5 All known visitor data relate to the National Park but large parts of the National Park, including areas that attract large numbers of visitors such as the villages, are not within the SPA. In the absence of any alternative data sources, NFDC has used household survey data from the New Forest Tourism Study [4] to estimate the proportion of people visiting the National Park from

areas adjacent to it whose primary destination is within New Forest European sites (see Table 5.1).

Table 5.1 Extract from New Forest Tourism Study household survey

Table 69: Locations visited most frequently by households in areas adjacent to the NP

	All mentions	First response	Second response	Third response
	606	606	606	606
No reply		26 (4%)	150 (25%)	300 (50%)
Lyndhurst	137 (23%)	54 (9%)	58 (10%)	25 (4%)
Burley	132 (22%)	72 (12%)	41 (7%)	19 (3%)
Brockenhurst	119 (20%)	50 (8%)	38 (6%)	31 (5%)
Beaulieu	107 (18%)	51 (8%)	28 (5%)	28 (5%)
Lymington	74 (12%)	28 (5%)	24 (4%)	22 (4%)
Wilverley/Wilverley Plain	50 (8%)	33 (5%) ☆	12 (2%)	5 (1%)
Bolderwood	35 (6%)	20 (3%) ☆	8 (1%)	7 (1%)
Sway	28 (5%)	10 (2%)	13 (2%)	5 (1%)
Rhinefield (Ornamental Drive)	27 (4%)	10 (2%) ☆	8 (1%)	9 (1%)
Godshill	26 (4%)	11 (2%)	10 (2%)	5 (1%)
Fordingbridge	26 (4%)	7 (1%)	10 (2%)	9 (1%)
Ringwood	25 (4%)	10 (2%)	11 (2%)	4 (1%)
Bramshaw	23 (4%)	10 (2%) ☆	8 (1%)	5 (1%)
Fritham	20 (3%)	15 (2%) ☆	2 (0%)	3 (0%)
Cadnam/ Cadman Cricket	20 (3%)	10 (2%)	6 (1%)	4 (1%)
Hatchet Pond	19 (3%)	7 (1%) ☆	7 (1%)	5 (1%)
Longslade/ Longslade Bottom	18 (3%)	10 (2%) ☆	7 (1%)	1 (0%)
Lepe beach	17 (3%)	5 (1%)	7 (1%)	5 (1%)
Dibden Purlieu/ Dibden Inclosure	16 (3%)	7 (1%) ☆	5 (1%)	4 (1%)
Holmesley	14 (2%)	8 (1%) ☆	4 (1%)	2 (0%)
Stoney Cross	14 (2%)	5 (1%) ☆	4 (1%)	5 (1%)
Ashurst	13 (2%)	4 (1%)	7 (1%)	2 (0%)
Exbury	12 (2%)	6 (1%)	4 (1%)	2 (0%)
Linford Bottom	11 (2%)	6 (1%) ☆	3 (0%)	2 (0%)
Wootton/Wootton Bridge	11 (2%)	5 (1%) ☆	1 (0%)	5 (1%)
Frogham	11 (2%)	3 (0%) ☆	5 (1%)	3 (0%)
Buckler's Hard	11 (2%)	1 (0%)	4 (1%)	6 (1%)
Emery Down	10 (2%)	2 (0%) ☆	3 (0%)	5 (1%)
Boldre	10 (2%)	2 (0%)	3 (0%)	5 (1%)
Canada/ Canada Common	9 (1%)	4 (1%) ☆	3 (0%)	2 (0%)
Nomansland	9 (1%)	3 (0%) ☆	4 (1%)	2 (0%)
Calshot	8 (1%)	1 (0%)	2 (0%)	5 (1%)
Bashley	7 (1%)	2 (0%)	4 (1%)	1 (0%)
Wood Green	7 (1%)	2 (0%) ☆	2 (0%)	3 (0%)
Bolton's Bench	6 (1%)	5 (1%) ☆	1 (0%)	-
Denny Wood	6 (1%)	3 (0%) ☆	3 (0%)	-
Norleywood	6 (1%)	2 (0%) ☆	2 (0%)	2 (0%)
Deerleap	6 (1%)	2 (0%) ☆	3 (0%)	1
Other locations	266 (44%)	106 (17%)	100 (16%)	60 (10%)

** Base: 606 respondent households who had visited the New Forest for leisure or recreation within the last 12 months*

☆ = location is within European sites

5.6 Table 5.1 shows that of the 500 surveyed households in areas adjacent to the National Park who identified a specific destination[3] for their visits, 162 or 32.4% identified a location that is likely to be within the New Forest European sites. This section of the household survey targeted households outside of the National Park but within approximately 5 miles of its boundary and is assumed to be representative of the likely behaviour of all residents of New Forest District.

Calculation 1 result: **32.4% of New Forest District residents who visit New Forest National Park visit New Forest European sites** [a]

Calculation 2: Estimated number of visits to New Forest National Park per NFDC household per annum

5.7 Again using survey data derived from households living adjacent to the National Park, Table 5.2 estimates the number of visits to the New Forest National Park per household per year. As in Calculation (1), these households are assumed to be representative of the likely behaviour of all residents of New Forest District (outside of the National Park). It should be noted that recreation habits are likely to vary greatly from one household to another. Whilst this calculation estimates an average number of visits per household the reality may be that 90% of the visits are generated by 10% of the households.

Table 5.2 How frequently do visitors from areas bordering the National Park visit?

Frequency of visits to National Park	[b] % of households visiting NP at stated frequency	[c] Assumed visits per household per year	[d] = [b] x [c]: Weighted average visits per household per year
Every day	8%	301	24.1
Several times a week	17%	130	22.1
About once a week	24%	41	9.8
At least once a month	28%	10	2.8
Less than once a month	19%	5	1.0
Not at all	3%	0	0.0
Weighted average visits per household per year, for households in area bordering the National Park who have visited in past 12 months: sum of column [d]			*59.8 [e]*
Proportion of households in area bordering National Park who have visited in past 12 months			83% [f]
Estimated visits per household per year to New Forest National Park by New Forest District residents: [e] x [f]			**49.6** [g]

Notes

[b] Source: Table 62 of household survey section of New Forest Tourism Survey [4]. Based on 606 respondent households located in an area bordering the National Park who had visited it for recreation or leisure in the past 12 months.

[c] Source: Section 6.2.3 of New Forest Tourism Survey [4]. The Tourism Survey assumed that respondents will over-estimate the frequency of their visits because they will fail to take into account time they spend away from the area or are unable to undertake their normal recreational activity, for example because of illness.

[f] Source: Table 62 of household survey section of New Forest Tourism Survey [4]. Based on 730 respondent households located in an area bordering the National Park.

Calculation 2 result: **Each New Forest District household is estimated to on average generate 49.6 visits to the New Forest National Park every year**

[3] 'Other locations' were excluded from the calculation

Calculation 3: Estimated number of additional visits to the New Forest European sites from planned residential development

5.8 Finally, the results of calculations 1 and 2 have been used to calculate the number of additional visits per year to the New Forest European sites that can be expected from the 4,575 new homes provided for in the NFDC Local Plan Part 2.

Net housing provision over the plan period 2006-2026	4,575 [h]
Estimated additional visits per year to New Forest National Park by 2026 from planned residential development: [g] x [h]	226,920 [i]
Estimated additional visits per year to New Forest European sites by 2026 from planned residential development in the absence of mitigation: [a] x [i]	**73,522** [j]
10% safety margin	7,352 [k]
Estimated additional visits per year to New Forest European sites to be mitigated: [j] + [k]	**80,874** [l]

Notes

[h] Source: Updated version of Core Strategy Table 2 supplied to LUC by NFDC, June 2013 and included in the HRA Addendum as Table 3.2.

[k] Assume 10% additional visitors are generated by residential development to reflect uncertainty within calculation assumptions as well as the Habitats Regulations requirement for a precautionary approach.

Calculation 3 result: **The number of visits to the New Forest European sites to be mitigated as a result of the additional housing in the NFDC Local Plan Part 2 is estimated to be 80,874 per year**

Discussion

5.9 This estimate of additional visitor pressure is intended to provide a basis for judgements on the scale of mitigation necessary to avoid likely significant effects on the New Forest European sites. NFDC's mitigation strategy would need to offset 80,874 recreational visits to the New Forest European sites for there to be no growth in visitors as a result of the Local Plan Part 2. This calculation ignores in-combination effects of visitors from other plans. However it is assumed that in order to meet the requirements of the Habitats Regulations, neighbouring LPAs will be required to mitigate the effects of residential growth within their plan areas.

5.10 Whilst mitigation measures will be aimed at residents of the new residential development proposed by the Local Plan Part 2, it is unrealistic to suppose they will be able to divert or offset the effects of all additional visits to the New Forest European sites by those residents. In reality, mitigation measures such as provision of SANGS or access management will also affect the behaviour of existing recreational visitors to the New Forest European sites. The suite of mitigation proposed by NFDC will ensure that the Local Plan Part 2 avoids adverse effects on the integrity of the European sites if the recreation pressure from 80,874 visits is offset, regardless of who makes those visits.

5.11 In order to place the scale of the mitigation effort required in context and inform judgements on whether it is likely to be achievable, it is useful to calculate a rough estimate of the proportion of all visits to the New Forest European sites that NFDC's mitigation strategy will need to offset, as follows. The New Forest Tourism Survey [4] estimates that the National Park receives 3,883,800 visitor days per year from households in areas adjacent to it. As a simplifying assumption and in the absence of any data for visits to the National Park from the Plan Area, this approximately 8 km wide band around the National Park is assumed to represent the NFDC Plan Area. Applying the proportion likely to visit the SPA from Calculation 1 gives a baseline estimate of annual visits by local people to the SPA at the start of the plan period of 3,883,800 x 32.4% = 1,258,351. Adding to this the new visits from NFDC planned development of 80,874 gives an estimated 1,339,225 visits to the SPA per annum from NFDC residents by the end of the plan period.

80,874, as a proportion of 1,339,225 is 6.0%, therefore NFDC's mitigation strategy would need to offset 6.0% of all residents' visits to the SPA for there to be no net growth in visitors to the SPA as a result of the Local Plan Part 2.

5.12 The calculation above ignores the fact that some elements of NFDC's mitigation strategy, for example contributions to access management measures within the New Forest European sites, will also help to mitigate the effects of the majority of visitors to the New Forest European sites who do not live adjacent to the Park boundary. Offsetting this is the fact that the approximately 8 km area adjacent to the National Park boundary which is assumed to represent the Plan Area actually includes households in parts of adjacent districts (Dorset, Wiltshire, Southampton and Test Valley) so the annual visitor estimate of 3,883,800 is likely to be overstated. The proportional reduction in visits to be achieved therefore provides only a very rough indication of the scale of recreational visit offsetting to be achieved.

5.13 In designing a mitigation strategy, it should also be remembered that some parts of the Plan Area will have more concentrated visitor effects from existing and planned housing than others. The evidence suggests, however, that such spatial variation may be influenced as much by ease of access to recreation sites by car as by proximity to NFDC residents' homes.

The Solent Coast European sites

5.14 In respect of the Solent Coast European sites, the work of the SDMP provides a clear conclusion of likely significant effects from the in-combination effects of residential development in neighbouring LPAs, a conclusion supported by Natural England. The project has also provided a detailed mitigation strategy to avoid these effects and Natural England has provided advice on a phased approach to implementing these measures. LUC has no reason to challenge the conclusions of the SDMP in respect of both the existence of likely significant effects and the package of mitigation required to mitigate these effects. In light of Natural England's endorsement of the SDMP and given the greater resources available to the SDMP than to this HRA Addendum, this HRA Addendum has not addressed mitigation requirements in respect of the Solent Coast European sites in any depth.

5.15 It is noted that within the Plan Area access opportunities for public recreation on the coast subject to the Solent SPA designation are very limited and not particularly suited to shoreline recreational purposes.

6 Mitigation strategy

6.1 This section considers the mitigation required to offset the potential increase in recreation pressure on the New Forest European sites associated with residential development tin the Local Plan Part 2. It then draws on the evidence reviewed in Section 4 and discussions with NFDC and other members of the Steering Group in order to outline the key elements needed for a strategy to mitigate potential recreation pressure on the New Forest European sites.

6.2 As previously stated, the outputs of the SDMP will be used by NFDC to determine an appropriate approach to mitigation of the recreational effects of the Local Plan Part 2 on the Solent Coast European sites. A similarly detailed analysis of mitigation requirements for recreation effects on the New Forest European sites is not available so this Section explores this question as far as the evidence allows. Finally, this section discusses how the mitigation strategy can be delivered in such a way that it is securely linked to housing delivery.

6.3 The suite of mitigation measures which would be appropriate in the context of the New Forest European sites is likely to include:

- **Provision of SANGS:** new or improved open space designed to attract residents of new development within the Plan Area who might otherwise visit the New Forest European sites for recreation.
- **Access and Visitor Management:** measures to limit the number of recreational visits to sensitive parts of the New Forest European sites and to modify visitor behaviour within those sites so as to reduce the potential for recreational impacts.
- **Monitoring:** whilst it cannot directly reduce additional visitor impacts on European sites associated with the Plan, monitoring will be important to manage uncertainty and inform future refinement of direct mitigation measures.

6.4 These elements of a potential mitigation strategy, each of which will have an important role to play in combination with the others, are explored in the remainder of this Section.

Role of SANGS

6.5 The objective of providing SANGS is to provide alternative recreational opportunities to local people, so helping to reduce use of European sites for recreation and the associated pressure on their designated features.

Definition of SANGS[4]

6.6 The term 'Suitable Alternative Natural Green Space' (SANGS) is used in this document to refer to any green space that is of a quality and type suitable for use by residents of New Forest District who might otherwise visit the New Forest European sites for recreation or leisure. SANGS may be created from:

- Existing open space of SANGS quality with no existing public access or limited public access, which for the purposes of mitigation could be made fully accessible to the public.
- Existing open space which is already accessible but which could be changed in character so that it is more attractive to the specific group of visitors who might otherwise visit the New Forest European sites.
- Land in other uses which could be converted into SANGS.

[4] This definition is adapted from Natural England guidance on the creation of SANGS for the Thames Basin Heaths Planning Zone [21].

6.7 NFDC Core Strategy policy CS7 requires that new residential developments make provision for at least 3.5 ha of public open space provision per thousand population, either through on-site provision or by financial contribution to enhance or create off-site provision, or a combination of the two. The supporting text states that the standard has been developed from the PPG17 Study commissioned by the Council and comprises 0.2 hectares of designed play spaces for children and young people, 1.25 hectares of formal recreational space and 2.0 hectares of Informal Open Space per thousand population. Policy CS7 additionally requires that new residential developments on sites of 0.5 ha or more provide informal open space on site, including play space. The policy also states that allocations will be made for additional provision of new allotment gardens, to meet local needs identified through community plans.

6.8 NFDC has confirmed that the SPD it intends to prepare detailing its mitigation strategy will require that all Informal Open Space provided to meet the CS7 policy requirement must also be designed in such a way as to maximise its potential for attracting the specific group of visitors who might otherwise visit the New Forest or Solent Coast European sites (see 'Securing Mitigation' section below). As such, all new Informal Open Space will meet the definition of SANGS. It is assumed that provision of other types of open space, such as formal recreational space or children's play space, is not capable of offsetting potential recreation pressure on European sites from new residential development. This is because such 'formal' open spaces provide for different types of recreation and offer a different experience to the semi-natural environments of the New Forest and Solent Coast European sites. Thus, provision of formal open space, be it alongside new residential development or addressing existing deficiencies is not an aspect of mitigation of the effects of the Local Plan Part 2 on European sites.

Existing levels of open space provision and the need to address shortfalls

6.9 It is probable that the frequency with which the District's residents visit the New Forest National Park and the European designations within it is, in part, dependent on the availability of alternative green spaces which are more accessible (e.g. they are closer to home or to car parking facilities) or which better meet the particular recreational needs of the individual (e.g. dog walkers may favour open space which is securely fenced off from busy roads). As part of the evidence base to support the Local Plan, NFDC and New Forest NPA jointly commissioned a PPG17 Study [24] which set local standards of provision for different types of open space and identified areas of existing deficit in relation to these standards (See Section 4 for a review of the PPG17 Study). NFDC has since produced Open Space Profiles [25] for each parish within the District. These provide a detailed update, as at 2010, of the existing provision of each type of open space defined in the PPG17 Study, including 'Informal Open Space' (amenity open space, natural green space and parks and gardens), the type most likely to be capable of meeting similar recreation and leisure needs to those provided by the New Forest European Sites.

6.10 The HRA Screening of NFDC's Local Plan Part 2: Sites and Development Management DPD concluded that, as recommended in the HRA of the Core Strategy, it is necessary to address these shortfalls in existing open space provision through the Sites and Development Management DPD in order to conclude that the DPD will have no likely significant effects on European sites. However, the PPG17 Study did not consider the issue of recreation pressure on the New Forest European sites as this was not its purpose. It is therefore unclear whether the need to avoid such pressure would have increased the recommended standards of open space provision and, if so, by how much. The PPG17 Study only states that the 'open forest' was excluded in considering existing levels of provision of accessible open space. As such, the existing deficits in open space provision compared to the PPG17 standards identified by the study cannot be readily applied to the HRA.

6.11 It is worth noting that the method set out in Section 5 for quantifying the scale of recreation pressure to be offset by NFDC's mitigation strategy implicitly takes into account existing levels of open space provision within New Forest District. This is because shortfalls in existing open space provision of the type identified by the PPG17 Study are likely to have increased existing visits to the New Forest National Park by local households (calculation 2), resulting in a higher estimate for existing visits to the New Forest European sites to be offset by the mitigation strategy (calculation 3).

Possible approaches to calculating the amount of SANGS required to offset additional recreation pressure

6.12 Section 5 has estimated that planned residential development in New Forest District will result in an additional 80,874 visits to New Forest European sites by 2026, including a 10% contingency in line with the precautionary principle. LUC has first considered whether it is possible to quantify the amount of SANGS provision that would be required to offset (i.e. avoid the potential effects of) all these additional visits if, hypothetically, no other form of mitigation were proposed.

6.13 LUC's literature review and an internal consultation with experts in green infrastructure planning have not revealed any widely accepted basis for converting visitor numbers into an amount of required open space. Three calculations are provided below to illustrate how the question of SANGS provision has been approached elsewhere, followed by a discussion of their usefulness for calculating the amount of SANGS that might be required in New Forest District.

Calculation 4: SANGS requirement based on visitor density at Eastleigh country parks

6.14 This calculation uses the approach adopted by the Test Valley Forest Park Feasibility Study (see review in Section 4). Visitor surveys of two existing country parks in the Eastleigh area were used to calculate the existing average number of visitors per hectare of country park, i.e. visitor density. This density has then been applied to the estimated additional visitors from new residential development in New Forest District to calculate how much SANGS would need to be provided for the SANGS to have the same visitor density as the proposed country park.

Visits per year to New Forest European sites to be offset: see Calculation 3, Section 5	80,874 [l]
Capacity of SANGS to accommodate visitors: see Test Valley Forest Park Feasibility Study, Section 4	1,000 visitors/ ha/ year [m]
Area of SANGS required to accommodate estimated visitor growth to New Forest European sites: [l] ÷ [m]	**80.9 ha** [n]

Calculation 5: SANGS requirement based on Thames Basin Heaths SANGS standard

6.15 The Inspector of the South East Plan proposed a standard rate of 8 hectares of SANGS per 1,000 head of new population within 5 km of Thames Basin Heaths SPA [26], a figure which has since been widely adopted by the districts surrounding the SPA, for example in Bracknell Forest Borough [27]. Calculation 5 applies this standard to the estimated number of new residents of all planned residential development in the District. This is broadly consistent with the Thames Basin Heaths approach since almost all planned development locations in New Forest District fall within 5 km of the New Forest European sites.

NFDC net housing provision over the plan period 2006-2026	4,575 [h]
Assumed persons per dwelling at end of plan period	2.25 [o]
Additional New Forest District residents of planned housing at end of plan period: [h] x [o]	10,294 [p]
Thames Basin Heaths SANGS provision standard	8.0 ha/ 1,000 persons [q]
Area of SANGS required to accommodate estimated additional residents of planned residential development: [p] x [q]	**82.4 ha** [r]

Notes

[o] Source: LUC estimate based on demographic data in Table 3.1

Calculation 6: SANGS requirement based on local standard for informal open space

6.16 Another means of calculating the amount of SANGS required to avoid additional recreation pressure on the New Forest European sites is application of the open space standards set out in the New Forest PPG17 Study [24] on the basis that the PPG17 Study's standards seek to provide for all of the outdoor recreational needs of the District's residents.

6.17 As set out in Section 4, the PPG17 study calls for provision of 4.0 hectares per thousand of accessible open space as a long term target for the New Forest District and New Forest National Park as a whole, as well as a provision standard to be met by new development. This suggested standard relates to all types of open space, including outdoor sports facilities and allotments. Within the 4.0 ha standard is a standard of 2.3 ha per thousand population of Informal Open Space, the type of accessible open space most likely to be capable of playing a role as SANGS, provided that it is appropriately designed. Calculation 6 shows how much Informal Open Space would need to be provided alongside planned development to meet the locally defined level of need of new residents for this category of open space.

Additional New Forest District residents of planned housing at end of plan period	10,294 [p]
New Forest PPG17 Study provision standard for Informal Open Space	2.3 ha/ 1,000 persons [s]
Area of Informal Open Space required to meet needs of additional residents of planned residential development: [p] x [s]	**23.7 ha** [t]

Discussion

6.18 Both calculation 4 and calculation 5 have limitations as a basis for calculating the amount of SANGS that would need to be provided in New Forest District to fully offset the estimated amount of visitor growth to New Forest European sites associated with planned residential development.

6.19 The main limitations of calculation 4 relate to the SANGS capacity figure of 1,000 visitors per hectare of SANGS per year, this being based on actual visitor numbers to Itchen Valley Country Park and Manor Farm Country Park, both in Eastleigh Borough. This figure implies a usage level of 2.7 visits a day per hectare of SANGS provided. Visitor numbers to the two country parks are likely to have been highly dependent on the amount and type of other green space within their catchments, limiting the relevance of the figures to New Forest District. Furthermore, there is no attempt to assess within the Test Valley Feasibility Study whether visitor levels to the two parks represent the parks' maximum capacities or if more visitors could readily be accommodated. Finally, it is generally accepted that green space should be provided in a hierarchy of sizes and a variety of types in order to maximise accessibility and to provide for a variety of uses; an open space provision standard based only on country parks therefore fails to reflect the experience offered by other types of open space in the open space hierarchy.

6.20 Looking at calculation 5, the standard of 8.0 ha per 1,000 population was calculated for the districts around Thames Basin Heaths SPA using similar logic to that applied in the Test Valley Forest Park Feasibility Study. That is, the calculation used actual visitor studies together with the area of the Thames Basin Heaths SPA to calculate existing visitor density in the SPA (7.16 ha/1,000) which was then rounded up to give the standard of 8.0 ha/1,000 [26]. The fact that the standard is based on visitor levels in a different European site which shares only some characteristics with New Forest European sites limits its applicability to New Forest District.

6.21 The assumption implicit in both calculations 4 and 5 (and by extension in the SANGS provision standard adopted for the Thames Basin Heaths SPA) is that SANGS should provide a similar visitor density to the designated site from which the SANGS seeks to divert visitors. This assumption is itself questionable when existing visitor densities are apparently so low – for example, the figure of 1,000 visitors per hectare per year used by the Test Valley Feasibility Study equates to a daily average of just 2.7 visitors per hectare per day. It may be that SANGS could readily accommodate greater visitor densities without significantly impacting visitor enjoyment.

6.22 Even if it is accepted that SANGS must provide the same visitor density as the open space being mitigated for, there are difficulties in applying this approach quantifying the SANGS requirement to the New Forest European sites. First of all, existing numbers of visitors to the European designated sites within the New Forest National Park are not known (the estimates in Table 5.2 only relate to visitors who live in an area immediately adjacent to the New Forest National Park).

Whilst total visitor numbers to the SPA could also be estimated, albeit with greater uncertainty, a second important methodological issue exists, the lack of information about where visitors go within the SPA. It seems likely that visitor density will be higher around the car parks and other main access points than in the open forest, a supposition backed up to a limited extent by New Forest visitor research. The household surveys from the Tourism South East study [4] show that only 31% of leisure visitors to the New Forest National Park travel there to walk for more than one hour. This is important since it means that most visitors to the SPA will experience higher visitor densities (although still low in absolute terms) than is implied by simply averaging visitor numbers across the whole area of the New Forest European sites. These slightly higher densities may be more akin to those used in the Test Valley Country Park and Thames Basin Heaths SANGS calculations than the even lower ones that would result from calculating the average visitor density across the whole of New Forest European sites.

6.23 Calculation 6 is not based on providing a certain visitor density within new open space but rather on meeting a level of need for accessible open space that has been defined by local study of the existing supply of and need for accessible open space of different types.

Recommendation on scale of SANGS requirement

6.24 In light of the discussion above, LUC concludes that none of the calculation approaches used elsewhere and reviewed, nor any other of which LUC is aware, provides an entirely robust basis for assessing the amount of SANGS that would be needed to offset any given level of estimated additional visitors to the New Forest European sites. In the absence of such a method, it is suggested that indicative targets for visitor diversion are assigned to the different elements of NFDC's mitigation strategy. Monitoring should then be used, as described below, to compare actual visitor patterns to target with a view to adjusting the mitigation strategy at regular intervals.

Calculation 7: Target number of visitors to be diverted by 30 ha of SANGS

6.25 Calculations 4 and 5 suggest that all of the estimated additional visits to the New Forest European sites associated with planned residential development could be offset by provision of approximately 82 ha of SANGS, assuming that SANGS is required to have the same, relatively low, visitor density of 2.7 visitors per hectare per day as implicit in the Test Valley Country Park Feasibility Study and Thames Basin Heaths standards. NFDC's proposed mitigation strategy will provide 30 ha of Informal Open Space designed in such a way as to maximise its potential for attracting the specific group of visitors who might otherwise visit the New Forest European sites. The suggested target number of visits to the New Forest European sites to be offset by provision of this 30 ha of SANGS is therefore as follows:

Visits per year to New Forest European sites to be offset	80,874 [l]
Approximate area of SANGS required to accommodate all estimated visitor growth to New Forest European sites: average of [n] and [r]	81.7 ha [u]
Amount of SANGS to be provided by NFDC mitigation strategy	30.0 ha [v]
Target number of visits to New Forest European sites to be offset by SANGS provision: [v]/[u] x [l] rounded	**29,700** or 37% of visits to be offset

6.26 Even if a robust basis of converting visitor uplift numbers into SANGS requirement were available, there is no guarantee that any amount of SANGS would successfully divert the required number of visitor trips. This is because residents of New Forest District have a particularly large and attractive open space resource right on their doorstep, in the form of the National Park (including those parts designated as European sites). It is hard to envisage any form or quantity of SANGS that is conceivably deliverable from developer contributions which could guarantee to compete with such an attraction. Even if very large levels of funding were available, the dispersed nature of development in New Forest District would make it very difficult to identify locations for large SANGS sites which would be effective in capturing the additional recreational visits from the majority of planned development locations within their likely catchment areas. For this reason, it will be essential for NFDC to also **support access management measures within the New Forest National Park and along the Solent coast and improvement of existing open**

spaces, as set out in Box 1at the end of this section. Together, these measures **will need to offset approximately 51,200 visits per year** to the New Forest European sites i.e. the remaining 63% of the total additional visits estimated to arise from planned residential development.

Broad locations for SANGS

6.27 As reiterated in the next section on SANGS design, SANGS sites should be readily accessible to the new residents of New Forest District they are designed to attract in order to maximise the likelihood that they will divert trips to the New Forest European sites. Detailed siting considerations will need to reflect the availability of suitable land for creation of newly accessible open space or improvement of existing open space. In considering accessibility, it should also be remembered that most households bordering the National Park who visit it for leisure do so by car. Whilst SANGS should ideally be located within walking distance of new residential development, limited road access and car parking may be required to maximise the likelihood that it will be used in preference to the New Forest European sites. This is likely to be particularly relevant for larger SANGS which may be more distant from some of the new residential development to be mitigated.

6.28 Table 6.1 sets out the broad locations for planned residential development in New Forest District alongside NFDC's proposed provision of 30 ha of new Informal Open Space which will be designed to serve a SANGS function. The amount of Informal Open Space to be provided in each location is also compared to the three 'standards' for SANGS provision set out in calculations 4, 5 and 6 above. The table shows that:

- SANGS will broadly be located where residential development is planned. This is due, in part, to opportunities to include site-specific SANGS alongside some of the larger housing allocation sites, particularly in Totton and Ringwood. This will allow recreation pressure to be mitigated close to its source, enhancing its likely effectiveness.
- Relative to the PPG17 standard of 2.3 ha per thousand people (calculation 6), large surpluses of SANGS will be created in Hythe & Dibden and Totton & Eling whilst Lymington & Pennington will have the largest deficit.
- Relative to the much higher Eastleigh country parks (calculation 4) and Thames Basin Heaths (calculation 5) standards for open space provision, (which assume visitor densities are required to be less than 3 visitors per hectare of provision per day), only Hythe & Dibden will be in surplus while the largest deficits will be in Lymington & Pennington followed by Totton & Eling. It should be remembered, however, that the provision of 30 ha of new SANGS sites is only expected to offset 37% of additional visitor trips to the New Forest European sites, with the remainder to be addressed via the other measures set out in Box 1 at the end of Section 6.

Table 6.1 Proposed SANGS provision vs. housing provision and open space standards

Plan Area	Settlement	Total housing provision 2006-2026	Planned provision of new SANGS (ha)	Estimated visits per year to New Forest SPA by new residents	Calculation 6 standard in ha/ooo persons **2.30** SANGS required to meet PPG17 Study standard	Surplus / (deficit) vs. open space provision standard	Calculation 4 standard in visitors/ha/year) **1,000** SANGS required to achieve same visitor density as Eastleigh country parks	Surplus / (deficit) vs. open space provision standard	Calculation 5 standard in ha/ooo persons **8.00** SANGS required to achieve same visitor density as Thames Basin Heaths	Surplus / (deficit) vs. open space provision standard
East	Totton & Eling	1,030	10.20	16,553	5.33	4.87	16.55	(6.35)	18.54	(8.34)
East	Marchwood	205	0.62	3,294	1.06	(0.44)	3.29	(2.67)	3.69	(3.07)
East	Hythe & Dibden	400	8.81	6,428	2.07	6.74	6.43	2.38	7.20	1.61
East	Holbury, Fawley & Blackfield	295	0.14	4,741	1.53	(1.39)	4.74	(4.60)	5.31	(5.17)
East Total		**1,930**	**19.77**	**31,016**	**9.99**	**9.78**	**31.02**	**(11.25)**	**34.74**	**(14.97)**
South	Lymington & Pennington	950	1.50	15,267	4.92	(3.42)	15.27	(13.77)	17.10	(15.60)
South	Milford-on-Sea	160	0.14	2,571	0.83	(0.69)	2.57	(2.43)	2.88	(2.74)
South	Hordle & Everton	105	0.09	1,687	0.54	(0.45)	1.69	(1.60)	1.89	(1.80)
South	New Milton	745	4.86	11,972	3.86	1.00	11.97	(7.11)	13.41	(8.55)
South Total		**1,960**	**6.59**	**31,498**	**10.14**	**(3.55)**	**31.50**	**(24.91)**	**35.28**	**(28.69)**
West	Bransgore	50	-	804	0.26	(0.26)	0.80	(0.80)	0.90	(0.90)
West	Ringwood	410	2.68	6,589	2.12	0.56	6.59	(3.91)	7.38	(4.70)
West	Fordingbridge	180	0.45	2,893	0.93	(0.48)	2.89	(2.44)	3.24	(2.79)
West	Ashford & Sandleheath	45	0.10	723	0.23	(0.13)	0.72	(0.62)	0.81	(0.71)
West Total		**685**	**3.23**	**11,008**	**3.54**	**(0.31)**	**11.01**	**(7.78)**	**12.33**	**(9.10)**
Grand Total		**4,575**	**29.59**	**73,522**	**23.68**	**5.91**	**73.52**	**(43.93)**	**82.35**	**(52.76)**

Assumptions

1 Assumed persons per dwelling	2.25
2. Estimated visits / household / year to New Forest National Park by NFDC residents	49.6
3. Estimated proportion of New Forest National Park visits to New Forest SPA	32.4%
4. Estimated visits / household / year to New Forest SPA by NFDC residents: [2] x [3]	16.1

Design of SANGS

6.29 Alternative open space, whether provided from land in other uses or through improving the accessibility and recreational functionality of existing open space, will need to be designed so as to maximise its chances of diverting New Forest District residents who might otherwise visit European sites for outdoor recreation, particularly for those activities mostly likely to cause disturbance of designated features. In the case of the New Forest European sites, examination of visitor data from the Tourism South East study [4] suggests that SANGS should therefore particularly target the needs of New Forest District residents who wish to go for recreational walks, with or without a dog. There is a lack of evidence from monitoring of visitor behaviour in response to SANGS provision so its required attributes are necessarily uncertain. However, analysis of visitor data from the Tourism South East study [4] together with views expressed by the authors of the main studies reviewed in Section 4 suggest that in order to be successful in diverting the user groups identified above, desirable SANGS attributes are likely to include:

- SANGS is, where possible, located closer to the development to be mitigated than the sensitive part of the European site to be protected to encourage access from the home by walking, thereby increasing convenience and likelihood of use.
- In certain SANGS locations such as those serving a wider catchment, short stay car parking may need to be provided, preferably with height restriction to discourage overnight stays and fly tipping.
- An attractive natural environment, with features of interest.
- Areas of woodland, particularly in larger SANGS, as these have the ability to absorb many more people than an open landscape without seeming to be crowded.
- Individual sites (smaller SANGS sites) or zones (larger SANGS sites) are targeted at different user groups. Sites to attract dog walkers, for example, should provide safe a range of routes which are safe for dogs to be let off the lead, for example by fencing off from busy roads, and be in locations perceived to maximise enjoyment of the dog.
- SANGS sites of an appropriate scale (or connected networks of sites) provide attractive, accessible linear routes that allow for a choice of circular walks, including some longer ones. These should include some waymarked footpaths without intruding on the natural character of the SANGS.

Role of access and visitor management

6.30 As indicated by the quantitative analysis above, the proposed scale of provision of new open space as SANGS is not intended to offset all of the additional visitors expected to be generated by planned residential development. Access and visitor management will also play an important role in the overall mitigation strategy proposed by NFDC in Box 1. This comprises measures designed to limit the number of recreational visitors to those parts of the New Forest European sites most sensitive to their presence as well as measures designed to modify visitors' behaviour within the European sites so as to reduce the potential for recreation pressure on designated features.

6.31 Development within the Plan Area should contribute towards the funding of appropriate management measures within the National Park and the SPA, required to mitigate its impact. Recommended mitigation measures have been identified from analysis of the New Forest Visitor Study [4] and the literature review in Section 4, as follows:

- Managing access by car to redistribute visitors e.g. limiting the availability of car parking spaces in proximity to sensitive sites, particularly during the breeding season; increasing the availability of parking at less sensitive locations; limiting vehicle access to sensitive locations. It should be noted that it is the Forestry Commission who manage the car parks of the Open Forest, and therefore the NPA and New Forest District Council have no direct powers to require car park closures – this would therefore require joint working. Correspondence with the NPA also suggests that trial car park closures have produced mixed results due to the

difficulty of limiting access – some users still walk into the target areas and park on verges nearby leading to disturbance. This suggests that enforcement measures may be required.

- Visitor education and supervision e.g. information boards at car parks to encourage visitors to avoid ground nesting areas or to keep dogs on leads; provision of additional wardens/rangers to educate and supervise visitors, especially during breeding seasons; promotion of less sensitive areas; community work to educate local residents on responsible behaviour. To the extent that these measures are implemented within the New Forest National Park and its European sites rather than in New Forest District, they will once again require joint working with the Forestry Commission and other landowners as well as New Forest NPA. The NPA has indicated its willingness to explore with NFDC and other surrounding districts provision of a seasonal ranger who could assist with access management and awareness-raising of recreation issues within the New Forest European sites.

6.32 There is a need for a more strategic approach to recreational mitigation within the New Forest European sites. This would ensure that residential development in each of the Plan areas likely to give rise to additional visitor pressure on the New Forest European sites makes an equitable contribution to mitigation measures required to manage that pressure and would also help to coordinate the mitigation actions funded by each District for maximum effectiveness. Such an approach could be led by Natural England.

6.33 In calculating the proportion of the overall mitigation package to be funded by residential development in each district, a coordinating authority could draw on the Footprint Ecology studies reviewed in Section 4, updating them for the latest amounts of planned development. By way of illustration, a simplistic approximation based on the 2008 study [5] is as follows:

Additional visitor days per year to New Forest National Park as result of additional development planned for 2006-2026 within 50 km of (but outside) New Forest National Park boundary **[5]**	1,050,000 [w]
Proportion of New Forest District residents visiting New Forest National Park who visit New Forest European sites (simplifying assumption: this proportion applies to ALL visitors to the New Forest National Park)	32.4% [a]
Estimated additional visits per year to New Forest European sites due to all planned development for 2006-2026 within 50 km of New Forest National Park boundary 2026 from planned residential development in the absence of mitigation: [w] x [a]	340,200 [x]
Estimated additional visits per year to New Forest European sites due to development in NFDC Plan area	80,874 [l]
Proportion of development-related additional recreational visits to New Forest European sites to be funded by development in NFDC Plan area: [l] ÷[x]	**24%**

Role of monitoring

6.34 It is apparent from the evidence review in Section 4 that considerable uncertainty exists as to the effects of recreation on European designated sites (particularly in the New Forest) and the effectiveness of different forms of mitigation, such as provision of SANGS and access management measures. This paucity of evidence introduces a considerable degree of uncertainty as to the scale and type of mitigation required to fully offset the predicted increase in recreational visitors to European sites that is expected to accompany residential development.

6.35 Uncertainty has been partially addressed by taking a precautionary approach to estimating the increased number of visitors to the New Forest European sites that will need to be offset by the mitigation strategy (see calculation 3). The main tool for addressing this uncertainty, however, will be monitoring. Although it cannot directly reduce visitor impacts, it provides a feedback loop so that the choice of and balance between different measures within the mitigation strategy can be adjusted to ensure that effective mitigation is provided by the mitigation strategy as a whole. Based on the evidence review in Section 4, monitoring should include:

- Habitats and species – detailed and carefully designed field work to monitor the distribution and numbers of Annex I bird species in the New Forest SPA to better understand reasons for the low bird population densities of certain indicator heathland species and to monitor future changes in bird populations. Monitoring of factors other than visitor pressure or visitor mitigation actions which are likely to directly or indirectly affect Annex I bird species, including grazing densities, burning regimes and other habitat management practices, to try to establish cause and effect for different management interventions.
- Visitors – monitoring of visitor levels and behaviour, including: investigation of actual visitor usage of internationally designated areas of the National Park; monitoring of changes in visitor patterns associated with access management measures; monitoring of usage of newly created open space provided as SANGS; before and after monitoring of usage of existing open space upgraded to allow it to perform a SANGS function, including usage of linear routes; survey of all areas used for formal and informal car parking within the National Park to inform access management options.

Evidence on a mitigation strategy for the Solent Coast European sites

6.36 As discussed above, this HRA Addendum relies on the findings of the SDMP in terms of the mitigation strategy needed to avoid likely significant effects on the Solent Coast European sites. The third and final phase of the SDMP identifies the mitigation measures that are capable of reducing disturbance impacts on wintering waterfowl; assesses the cost effectiveness and practicality of each; identifies which measures could be established rapidly, if required, and considers the practicalities of joint working across local authorities. This detail is not reproduced here but the following are considered to be the key elements of a mitigation package:

- Appointment of a delivery officer.
- Creation of a team of wardens / rangers.
- A coastal dog project.
- A review of parking.
- A review of watersports zones / watersports access.
- Creation of a 'codes of conduct' pack.
- A series of site-specific projects.
- Watersports permitting and related enforcement.
- Provision of SANGS / additional GI / alternative roost sites.

6.37 Whilst supporting the conclusions of Phase II of the SDMP, Natural England has yet to issue final advice on Phase III of the SDMP, the project's recommended mitigation package. In recognition of the fact that the full package of avoidance measures is likely to take some time to be agreed and implemented by all of the LPAs involved, Natural England advises the following phased approach to mitigation in order to minimise the risk of delays to housing development:

- *"First, a short period from now, in which planning applications are processed on a case by case basis, in which a funding contribution is secured but not set at a specific level, pending the agreement of an interim contributions scheme.*
- *Second, hopefully a short number of months away, after an interim contributions scheme has been set. During this second phase the interim contributions scheme and the quick win measures would be implemented and alongside this the full package of measures would be developed*
- *Third, perhaps in two or three years' time, the full package of avoidance measures would be introduced, with a reviewed contributions scheme."*

6.38 NFDC's detailed mitigation strategy will need to clearly define an appropriate proportion of developer contributions to be allocated to the measures recommended by the SDMP rather than to measures designed to mitigate recreation effects on the New Forest European sites.

Proposed mitigation strategy

6.39 Drawing on LUC's advice in this report, discussions within the project Steering Group and on the evidence base for the Local Plan Part 2 (for example the PPG17 Study), NFDC has proposed the strategy outlined in Box 1 to mitigate recreational effects of new residential development on the New Forest and Solent Coast European sites.

Box 1: Outline mitigation strategy proposed by NFDC

Alternative open space

NFDC has confirmed that the alternative open space element of its mitigation strategy will comprise delivery of new areas of green space as well as enhancement of existing green space and linear routes, as set out below.

New green space

Delivery of 30 ha of Informal Open Space which is not currently available for this use. Developers will be required to fund this through a mixture of on-site provision (in line with the Core Strategy requirement for residential developments on sites of 0.5 ha or more to provide Informal Open Space) and contributions to off-site open space allocations. The mitigation strategy for European sites will be detailed in a Supplementary Planning Document (SPD) which will address design requirements for this open space to maximise its potential for attracting the specific group of visitors who might otherwise visit the New Forest or Solent Coast European sites.

Enhancement of existing green space and footpaths / rights of way

A programme of enhancement of footpaths/rights of way and existing open spaces in all settlements in which the Local Plan provides for residential development. This will seek to link up and improve the accessibility and attractiveness of rights of way and open spaces outside European sites to residents of the District who might otherwise visit the New Forest / Solent Coast European sites. Attractiveness to dog walkers, for example, might be enhanced by provision of a small car park and provision of routes/open spaces that are fenced off from busy roads. Where mitigation is to be provided via enhancement of open spaces which are already in use, a baseline survey followed by regular monitoring will be put in place to establish the additional usage achieved. Details of the projects to be brought forward will be provided in the mitigation strategy SPD.

Access management

NFDC will agree contributions towards the funding of appropriate access management measures, including provision of additional wardens/rangers, for the New Forest European sites with the New Forest National Park Authority (and Natural England, if appropriate) - this will draw on evidence provided in LUC's Evidence Review and HRA Addendum and be designed in partnership with the NFNPA. The potential will be explored to tie in with the Local Sustainable Transport Fund work, which is identifying a core network of community routes. Access management within the National Park is under the control of the Forestry Commission and other landowners and will therefore be planned and implemented via joint working. Appropriate access management measures for the Solent Coast are set out in the SDMP Phase III report and Natural England's advice on interim measures (see above) and NFDC will gather contributions towards these.

Monitoring

Contributions will be gathered to support monitoring of the condition of European designated habitats and species, progress in implementing the mitigation strategy, and visitor patterns at new and enhanced open spaces and within the New Forest and Solent Coast European sites.

Securing mitigation

6.40 To ensure that mitigation is provided alongside planned residential development, NFDC has proposed the following policy delivery mechanism:

- A strong policy in the Sites and Development Management DPD which summarises requirements for new development and which prioritises the use of developer contributions for mitigation. A model for the type of policy envisaged is provided by Policy CP14B European Sites in the Surrey Heath Borough Council adopted Core Strategy.
- Clear identification of those projects within the Infrastructure Delivery Plan (IDP) which form part of the mitigation strategy and a statement that they will be prioritised because their delivery is a legal requirement of the Habitats Regulations.
- A Supplementary Planning Document (SPD) which details the mitigation strategy and re-emphasises the priority of its delivery. It is recommended that this detail includes:
    - worked examples which illustrate what new or enhanced open spaces or linear routes will consist of and which highlight how these will deliver the required mitigation alongside the added benefit of improved amenity for local residents;
    - how developer contributions will be split between mitigation measures designed to address recreation pressure on the New Forest and Solent Coast European sites, including towards access management measures;
    - the rationale behind 30 ha as the amount of additional Informal Open Space to be delivered as SANGS;
    - maps showing the relationship between new or enhanced open spaces intended to function as SANGS and new residential development;
    - an indication of when each SANGS site will become available as public open space to demonstrate that SANGS provision across the Plan Area is proceeding alongside occupation of residential development;
    - a checklist of design features for new or enhanced open space which is intended to perform as SANGS;
    - clear identification of which bodies are responsible for implementing each mitigation measure and the arrangements that will be put in place with the Forestry Commission, other New Forest landowners and the NPA to ensure that access management measures are implemented in a timely manner; and
    - a costing exercise which demonstrates that provision and maintenance of the proposed suite of mitigation measures to be funded by developer contributions will not threaten the viability of proposed residential development.
- If necessary, a Statement of Common Ground with Natural England, setting out the agreed approach to prioritising developer contributions to mitigation measures.

6.41 NFDC's intention is to consult on Main Modifications to the Local Plan Part 2: Sites and Development Management DPD, a revised Infrastructure Delivery Plan and a Mitigation Strategy (Part 1) SPD before submitting them to the Local Pan Part 2 Examination Inspector for consideration as the Council's response to the concerns he expressed in Examination Documents ID9 and relevant parts of post hearing note ID12. Reporting on the amounts of developer contributions gathered and what those contributions have been spent on will be contained within NFDC's Annual Monitoring Report (AMR) so that delivery of new housing in the absence of mitigation can be identified and corrective action taken at an early stage.

7 Conclusions of HRA Addendum

7.1 NFDC's HRA Screening of the Proposed Submission version of the Local Plan Part 2 identified recreational impacts, prior to mitigation, on Solent and Southampton Water SPA and Ramsar site and The New Forest SAC, SPA and Ramsar site from the plan alone. Recreational effects in-combination with the plans of neighbouring districts were identified on all of these European sites and on Solent Maritime SAC.

7.2 In respect of the Solent Coast European sites, the best available evidence, in the form of the SDMP, shows that the in-combination effects of proposed levels of housing development along the Solent Coast will have a likely significant effect on wintering bird interest. The SDMP Phase III Report describes the mitigation package required to address these effects. NFDC's mitigation strategy should demonstrate that it is making a sufficient contribution to this strategy to address the recreation effects associated with its share of residential development along the Solent Coast. It is important to note that many elements of the mitigation package specified by the SDMP for the Solent Coast European sites are similar to those needed to provide mitigation for the New Forest European sites. When considering the amount of mitigation required to mitigate likely effects of recreation on either set of European sites it should be remembered that a single mitigation measure, for example provision of SANGS alongside new development, will contribute to the mitigation of the potential effects on both sets of European sites since it is the same set of new residents visiting both sites. The requirements of the two mitigation packages should not, therefore, be considered additive.

7.3 In respect of the New Forest European sites, LUC's review of evidence has confirmed that whilst evidence of significant adverse effects from recreation is inconclusive, sufficient uncertainty exists that significant effects on the integrity of the New Forest SPA cannot be ruled out. LUC's literature review, discussions with the project steering group and professional judgement have been used to better understand the nature of recreational impacts arising from new residential development within the Plan Area and so inform the advice to NFDC within this report on the measures required to mitigate them. This advice has informed the outline mitigation strategy put forward by NFDC and described in the preceding section of this report.

7.4 The two main elements of NFDC's strategy which will serve to reduce visitor pressure are:

- Provision of additional areas of informal open space designed to divert recreational use by local residents, away from European sites (SANGS).
- Managing visitor access to and behaviour at the New Forest's European sites.

7.5 The limited evidence on the likely effectiveness of possible approaches to mitigation means that it is unrealistic to expect certainties that any proposed mitigation package will prevent an increase in recreation pressure as a result of the Plan. There is a lack of conclusive evidence on the impact of recreation activities on designated features at the New Forest European sites and it is not possible to isolate the impacts arising from development in this Plan from the numerous other factors beyond the influence of the Plan that affect the European sites. A third essential element of the mitigation strategy is therefore monitoring that will help to explain, understand and manage these uncertainties. A Mitigation Strategy SPD will provide detail on each of these three elements, including how they will be funded and the joint working arrangements that will be put in place with landowners to deliver measures within the New Forest National Park and its European designations.

7.6 LUC is satisfied that mitigation approach described above provides a satisfactory degree of certainty at this stage of the planning process that the mitigation package will successfully avoid adverse effects from the Local Plan Part 2, either alone or in-combination with other plans or projects, on the integrity of Solent and Southampton Water SPA and Ramsar site, Solent Maritime SAC and The New Forest SAC, SPA and Ramsar site.

8 References

[1] New Forest District Council, "New Forest LDF Core Strategy: New Forest Outside the National Park," New Forest District Council, Unpublished report, 2009.

[2] New Forest District Council, "HRA Screening of Proposed Submission Sites and Development Management DPD," 2012.

[3] S. Emerson, "New Forest District Council - Local Plan (Part 2) Examination: Inspector's Preliminary Conclusions on COmpliance with the Habitat Regulations," Unpublished letter to NFDC, 2013.

[4] Tourism South East, "Visitor Survey of the New Forest National Park 2004-2005," 2005.

[5] J. Sharp, J. Lowen and D. Liley, "Changing patterns of visitor numbers within the New Forest National Park," Footprint Ecology / New Forest National Park Authority, 2008.

[6] K. Gallagher, M. Graham and S. Colas, "PROGRESS Project Handbook," PROGRESS Project, Lyndhurst, 2007.

[7] E. Wiseman, "Breeding waders on the New Forest 2011 - PROGRESS Project," Forestry Commission, Unpublished report, 2011.

[8] H. Fearnley, R. Hoskin and D. Liley, "Urban Development and the New Forest SPA," Footprint Ecology / New Forest National Park Authority, 2012.

[9] A. C. Newton, "Chapter 20. Synthesis: status and trends of biodiversity in the New Forest," in *Biodiversity in the New Forest*, Newbury, Pisces Publications for Bournemouth University, 2010, pp. 218-228.

[10] D. Liley and D. Tyldesley, "Solent Disturbance and Mitigation Project: Phase III, Mitigation," Footprint Ecology / David Tyldesley & Associates, Unpublished, 2013.

[11] ABP Marine Environmental Research, "Scientific Peer Review of Outputs of the Solent Disturbance and Mitigation Porject," Natural England, 2012.

[12] R. Green, "Comments on "Scientific Peer Review of Outputs of the Solent Disturbance and Mitigation Project", a report by by ABP Marine Environmental Research Ltd," Unpublished report, 2013.

[13] D. Liley, R. Clarke, H. Fearnley and R. Stillman, "Response to the: "Scientific Peer Review of Outputs of the Solent Disturbance and Mitigation Project", ABPmer Report R.2051 for Natural England," Footprint Ecology and Bournemouth University, Unpublished report, 2013.

[14] Natural England, "Letter to PUSH Planning Officers Group on 'Planning applications affecting Solent Special Protection Areas (SPA)'," Natural England, Unpublished letter, 2013.

[15] R. T. Clarke, J. Sharp and L. D, "Access Patterns in South-east Dorset. The Dorset Household Survey: Consequences for Future Housing and Greenspace Provision," Footprint Ecology,

Unpublished report, 2008.

[16] D. Liley, J. Sharp and C. R. T, "Access Patterns in South-east Dorset. Dorset Household Survey and Predictions of Visitor Use of Potential Greenspace Sites," Footprint Ecology, Unpublished report, 2008.

[17] P. Lomax, "Test Valley Forest Park Feasibility Study (Final Draft)," Green Dimensions Ltd / Test Valley Borough Council, Unpublished report, 2009.

[18] Natural England et al, "England Leisure Visits Survey," Natural England, Unpublished report, 2006.

[19] Natural England, "The State of the Natural Environment," Natural England, Unpublished report, 2008.

[20] K. Guest, "Feasibility study for the provision of a forest park in South West Hampshire," Forestry Commission / Partnership for Urban South Hampshire, Unpublished, 2011.

[21] Test Valley Borough Council, "Test Valley Borough Revised Local Plan DPD," Test Valley Borough Council, Unpublished report, 2013.

[22] UE Associates, "Green Infrastructure Strategy," Partnership for Urban South Hampshire, Unpublished report, 2010.

[23] Natural England, "Guidelines for the creation of Suitable Alternative Natural Greenspace (SANGS). Version dated 12.06.08.," Natural England, Unpublished report, 2008.

[24] Bennett Leisure and Planning Ltd, "Planning Policy Guidance Note 17: Open Space, Sport and Recreation Study for the New Forest Area," New Forest District Council and New Forest National Park Authority, Unpublished report, 2007.

[25] New Forest District Council, "BP38b: New Forest District (Outside the National Park) Open Space Profiles," NFDC, Unpublished report, 2011.

[26] J. C. Cox and N. E. J. Pincombe, "Habitats Regulations Assessment for the Whitehill Bordon Eco-town," UE Associates and Jonathan Cox Associates on behalf of the Whitehill Bordon Eco-town, Unpublished report, 2010.

[27] Bracknell Forest Council, "Thames Basin Heaths Special Protection Area Avoidance and Mitigation Supplementary Planning Document," Unpublished report, 2012.

[28] JNCC, "Special Protection Areas (SPAs): England," [Online]. Available: http://jncc.defra.gov.uk/page-1401 . [Accessed 1 July 2013].

[29] Forest Research, "Impacts of climate change on the distribution of plant species found in native beech woodland," [Online]. Available: http://www.forestry.gov.uk/fr/INFD-5ZYJS6. [Accessed 2 July 2013].

Appendix 1: Qualifying features of identified European sites

The qualifying features of the New Forest and Solent Coast European sites, as set out in the HRA of the Sites and Development Management DPD, are reproduced below.

Solent Maritime SAC

qualifying features:

- Estuaries
- Spartina swards (Spartinion maritimae)
- Atalntic salt meadows (Glauco-Puccinellietalia maritimae)
- Sandbanks - slightly covered by sea water all the time
- Mudflats and sandflats - not submerged at low tide
- Annual vegetation drift lines
- Perennial vegetation of stony banks
- Salicornia and other annuals colonising mud and sand
- Shifting white dunes with Ammophila arenaria
- Desmoulin's whorl snail Vertigo moulinsiana

Solent and Southampton Water SPA

qualifying features:

- Little Tern Sterna albifrons, 49 pairs representing at least 2.0% of the breeding population in Great Britain (5 year peak mean, 1993-1997)
- Sandwich Tern Sterna sandvicensis, 231 pairs representing at least 1.7% of the breeding population in Great Britain (5 year peak mean, 1993-1997)
- Common Tern Sterna hirundo, 267 pairs representing at least 2.2% of the breeding population in Great Britain (5 year peak mean, 1993-1997)
- Mediterranean Gull Larus melanocephalus, 2 pairs representing at least 20.0% of the breeding population in Great Britain (5 year peak mean, 1994-1998)
- Roseate Tern Sterna dougallii, 2 pairs representing at least 3.3% of the breeding population in Great Britain (5 year peak mean, 1993-1997)
- Black-tailed Godwit Limosa limosa islandica, 1,125 individuals representing at least 1.6% of the wintering Iceland - breeding population (5 year peak mean, 1992/3-1996/7)
- Dark-bellied Brent Goose Branta bernicla bernicla, 7,506 individuals representing at least 2.5% of the wintering Western Siberia/Western Europe population (5 year peak mean, 1992/3-1996/7)
- Ringed Plover Charadrius hiaticula, 552 individuals representing at least 1.1% of the wintering Europe/Northern Africa - wintering population (5 year peak mean, 1992/3-1996/7)
- Teal Anas crecca, 4,400 individuals representing at least 1.1% of the wintering Northwestern Europe population (5 year peak mean, 1992/3-

1996/7)

Birds Directive Assemblage Qualification (the area qualifies by regularly supporting at least 20,000 waterfowl): - Over winter, the area regularly supports 51,361 individual waterfowl (5 year peak mean 1998) (cf 53,948 individual waterfowl (5year peak mean 1991/2 - 1995/6))

Solent and Southampton Water Ramsar

qualifying features:

Ramsar criterion 1: several outstanding wetland habitat types, including unusual double tidal flow, a major shletered channel, saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs

Ramsar criterion 2: nationally rare species assemblage

Ramsar criterion 5: winter assemblage of 51,343 waterfowl (5 year peak mean 1998/99 - 2002/03)

Ramsar criterion 6: Ringed plover , Charadrius hiaticula, Europe/Northwest Africa, 397 individuals, representing an average of 1.2% of the (on passage) GB population (5 year peak mean 1998/9-2002/3)

Ramsar criterion 6: Black-tailed godwit , Limosa limosa islandica, Iceland/W Europe, 1,240 individuals, representing an average of 3.5% of the over-wintering GB population (5 year peak mean 1998/9-2002/3)

Ramsar criterion 6: Dark-bellied brent goose, Branta bernicla bernicla, 6,456 individuals, representing an average of 3% of the over-wintering GB population (5 year peak mean 1998/9-2002/3)

Ramsar criterion 6: Eurasian teal Anas crecca, NW Europe, 5,514 individuals, representing an average of 1.3% of the GB over-wintering population (5 year peak mean 1998/99-2002/03)

New Forest SAC

qualifying features:

Northern Atlantic wet heaths with Erica tetralix

European dry heaths

Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)

Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)

Asperulo-Fagetum beech forests

Old acidophilous oak woods with Quercus robur on sandy plains

Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)

Bog woodland

Alkaline fens

Depressions on peat substrates of the Rhynchosporion

Transition mires and quaking bogs

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 Iso?to-Nanojuncetea

Southern damselfly Coenagrion mercuriale

Stag beetle Lucanus cervus

Great crested newt Triturus cristatus

New Forest SPA

qualifying features:

Dartford Warbler Sylvia undata, 538 pairs representing at least 33.6% of the breeding population in Great Britain

Honey Buzzard Pernis apivorus, 2 pairs representing at least 10.0% of the breeding population in Great Britain

Nightjar Caprimulgus europaeus, 300 pairs representing at least 8.8% of the breeding population in Great Britain

Woodlark Lullula arborea, 184 pairs representing at least 12.3% of the breeding population in Great Britain (Count as at 1997)

Hen Harrier Circus cyaneus, 15 individuals representing at least 2.0% of the wintering population in Great Britain

New Forest Ramsar

qualifying features:

Southern damselfly Coenagrion mercuriale

Stag beetle Lucanus cervus

Great crested newt Triturus cristatus

Bullhead Cottus gobio

Brook lamprey Lampetra planeri

Dartford Warbler Sylvia undata, 538 pairs representing at least 33.6% of the breeding population in Great Britain

Hen Harrier Circus cyaneus, 15 individuals representing at least 2.0% of the wintering population in Great Britain

Ramsar criterion 1: outstanding valley mires - bog woodland

Ramsar criterion 1: outstanding valley mires - depressions on peat substrates of the Rhynchosporion

Ramsar criterion 1: outstanding wet heaths

Ramsar criterion 2: nationally rare species assemblage

Ramsar criterion 3: species assemblage of importance to maintaining biogeographic biodiversity

Appendix 2: Conservation objectives of identified European sites

The conservation objectives of the New Forest and Solent Coast European sites, as set out in the HRA of the Sites and Development Management DPD, are reproduced below. Note that Natural England does not publish conservation objectives for Ramsar sites.

Solent Maritime SAC

conservation objectives:

Medina estuary
Subject to natural change, to maintain the following habitats in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated:
- Littoral sediment
(*) or restored to favourable condition if features are judged to be unfavourable.

Yar estuary
Subject to natural change, to maintain the following habitats in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated:
- Littoral sediment
- Coastal lagoon
(*) or restored to favourable condition if features are judged to be unfavourable.

Boulder and Hamstead Cliffs
Subject to natural change, to maintain the following habitats in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated:
- Littoral sediment
(*) or restored to favourable condition if features are judged to be unfavourable.

Chichester Harbour
Subject to natural change, maintain* the Chichester Harbour estuary in favourable condition, in particular:
- Saltmarsh communities
- Intertidal mudflat communities
- Intertidal sandflat communities
- Intertidal mixed sediment commuities
- Subtidal sediment communities
Subject to natural change, maintain* the Atlantic salt meadows (Glauco - Puccinellietalia) favourable condition?, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities
Subject to natural change, maintain* the Cordgrass swards (Spartinion) favourable condition?, in particular:

- Small cordgrass (Spartina maritima) commumities
- Smooth cordgrass (Spartina alterniflora) Communities
- Townsend?s cordgrass (Spartina townsendii) Communities
*maintenance implies restoration if the feature is not currently in favourable condition.

Langstone Harbour
Subject to natural change, maintain* the estuary in favourable condition, in particular:
- Saltmarsh communities
- Intertidal mudflat communities
- Intertidal sandflat communities
- Intertidal mixed sediment commuities
- Subtidal sediment communities
Subject to natural change, maintain* the Atlantic salt meadows (Glauco - Puccinellietalia) in favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities
Subject to natural change, maintain*, in favourable condition, the:
- saline lagoons
*maintenance implies restoration if the feature is not currently in favourable condition.

Hurst Castle and Lymington River estuary
Subject to natural change, maintain* the Atlantic salt meadows (Glauco - Puccinellietalia) favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities
Subject to natural change, maintain* the saline lagoons in favourable condition
*maintenance implies restoration if the feature is not currently in favourable condition.

Eling and Bury Marshes
Subject to natural change, maintain * the Atlantic salt meadows (Glauco - Puccinellietalia) favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities
Subject to natural change, maintain * the Cordgrass swards (Spartinion) in favourable condition, in particular:
- Smooth cordgrass (Spartina alterniflora) Communities
- Townsend?s cordgrass (Spartina townsendii) Communities
*maintenance implies restoration if the feature is not currently in favourable condition.

Hythe to Calshot Marshes

Subject to natural change, maintain* the Atlantic salt meadows (Glauco - Puccinellietalia) in favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities

Subject to natural change, maintain* the Cordgrass swards (Spartinion) in favourable condition, in particular:
- Smooth cordgrass (Spartina alterniflora) Communities
- Townsend?s cordgrass (Spartina townsendii) Communities

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

King's Quay Shore

Subject to natural change, maintain* the estuary in favourable condition, in particular:
- Saltmarsh communities
- Intertidal mudflat communities
- Intertidal sandflat communities
- Intertidal mixed sediment commuities
- Subtidal sediment communities

Subject to natural change, maintain* the Atlantic salt meadows (Glauco - Puccinellietalia) in favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities

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

Lee-on-the-Solent to Itchen estuary

Subject to natural change, maintain* the estuary in favourable condition, in particular:
- Saltmarsh communities
- Intertidal mudflat communities
- Intertidal mixed sediment commuities
- Subtidal sediment communities

Subject to natural change, maintain* the Atlantic salt meadows (Glauco - Puccinellietalia) in favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities

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

Lincegrove to Hackett's Marshes

Subject to natural change, maintain* the Estuary in favourable condition, in particular:
- Saltmarsh communities
- Intertidal mudflat communities
- Intertidal mixed sediment commuities

- Subtidal sediment communities
Subject to natural change, maintain the Atlantic salt meadows (Glauco - Puccinellietalia) in favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities
*maintenance implies restoration if the feature is not currently in favourable condition.

Lower Test Valley
Subject to natural change, maintain* the Atlantic salt meadows (Glauco - Puccinellietalia) favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities
*maintenance implies restoration if the feature is not currently in favourable condition.

Newtown Harbour
Subject to natural change, maintain*, in favourable condition, the estuary, with particular reference to:
- Saltmarsh communities
- Intertidal mudflat communities
- Intertidal mixed sediment commuities
- Subtidal sediment communities
Subject to natural change, maintain*, in favourable condition, the Atlantic salt meadows (Glauco - Puccinellietalia), with particular reference to:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities
Subject to natural change, maintain*, in favourable condition, the Cordgrass swards (Spartinion) with particular reference to:
- Small cordgrass (Spartina maritima) commumities
*maintenance implies restoration if the feature is not currently in favourable condition.

North Solent
Subject to natural change, maintain* the estuary in favourable condition, in particular:
- Saltmarsh communities
- Intertidal mudflat communities
- Intertidal mixed sediment commuities
- Subtidal sediment communities
Subject to natural change, maintain the Atlantic salt meadows (Glauco - Puccinellietalia) in favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities

- High-marsh communities
- Transitional high marsh communities
*maintenance implies restoration if the feature is not currently in favourable condition.

Thorness Bay
Subject to natural change, maintain* the Estuary in favourable condition, in particular:
- Intertidal mudflat communities
- Intertidal mixed sediment commuities
- Subtidal sediment communities
*maintenance implies restoration if the feature is not currently in favourable condition.

Upper Hamble estuary and woods
Subject to natural change, maintain* the estuary in favourable condition, in particular:
- Saltmarsh communities
- Intertidal mudflat communities
- Intertidal mixed sediment commuities
- Subtidal sediment communities
Subject to natural change, maintain the Atlantic salt meadows (Glauco
- Puccinellietalia) in favourable condition, in particular:
- Pioneer marsh communities
- Low marsh communities
- Mid-marsh communities
- High-marsh communities
- Transitional high marsh communities
* maintenance implies restoration if the feature is not currently in favourable condition.

Solent and Southampton Water SPA

conservation objectives:

Medina estuary
Subject to natural change, to maintain the following habitats in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated:
Habitat Types represented (Biodiversity Action Plan categories)
- Neutral grassland
- Fen, marsh and swamp
- Broad-leaved woodland
- Littoral sediment
(*) or restored to favourable condition if features are judged to be unfavourable.

Yar estuary
Subject to natural change, to maintain the following habitats in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated:

Habitat Types represented (Biodiversity Action Plan categories)
- Grazing marsh comprising neutral grassland
- Supra Littoral sediment
- Littoral sediment
- Coastal lagoon
(*) or restored to favourable condition if features are judged to be unfavourable.

Brading Marshes to St Helen's Ledges
To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- coastal grassland
- standing water
- boulder and cobble shores
- saltmarsh
- intertidal sand and mudflat
+ dark-bellied brent goose, teal, ringed plover and black-tailed godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- coastal grassland
- standing water
- boulder and cobble shores
- saltmarsh
- intertidal mudflats and sandflats
*maintenance implies restoration if the feature is not currently in favourable condition.

Lymington River Reedbeds
To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- coastal grassland
- standing water
- reedbed
- saltmarsh
- intertidal mudflats and sandflats
+ dark-bellied brent goose, teal ringed plover and black-tailed godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- coastal grassland
- standing water
- reedbed
- saltmarsh
- intertidal mudflats and sandflats
*maintenance implies restoration if the feature is not currently in favourable condition.

Ryde Sands and Wooton Creek
To maintain*, in favourable condition, the habitats for populations of migratory bird species + of European importance, with particular reference to:
- intertidal mudflats and sandflats

+ dark-bellied brent goose, teal and ringed plover.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- intertidal sand and mudflats
*maintenance implies restoration if the feature is not currently in favourable condition.

Sowley Pond
To maintain*, in favourable condition, the habitats for the populations of migratory bird species +of European importance, with particular reference to:
- coastal grassland
- standing water
+ teal.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- coastal grassland
- standing water
*maintenance implies restoration if the feature is not currently in favourable condition.

Titchfield Haven
To maintain*, in favourable condition, the habitats for the populations of Annex 1 species + of European importance, with particular reference to:
- Reedbeds and open water with marshy grassland and scrub
+ Common Tern.
To maintain*, in favourable condition, the habitats for the populations of migratory bird species +of European importance, with particular reference to:
- Reedbed and open water with marshy grassland and scrub
+ teal, ringed plover and black-tailed godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- Reedbed and open water with marshy grassland and scrub
*maintenance implies restoration if the feature is not currently in favourable condition.

Hurst Castle and Lymington River
To maintain*, in favourable condition, the habitats for the populations of the Annex 1 species + of European importance, with particular reference to:
- intertidal with saltmarsh and shingle
+ Mediterranean gull, Sandwich Tern, Common Tern, Little Tern
To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- intertidal with saltmarsh and shingle
- grazing marsh
- permanent grassland
+ dark-bellied brent goose, teal, ringed plover and black-tailed godwit
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- intertidal with saltmarsh and shingle
- grazing marsh

- permanent grassland
- reedbed/open water
- vegetated shingle
- saline lagoons

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

Eling and Bury Marshes

To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- intertidal mudflat
- saltmarsh and fringing habitats

+ dark-bellied brent goose, teal, ringed plover and black-tailed godwit.

To maintain*, in favourable condition?, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- intertidal mudflat
- saltmarsh and fringing habitats

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

Hythe to Calshot Marshes

To maintain*, in favourable condition , the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- saltmarsh
- intertidal mudflats and sandflats
- mixed sediment shores

+ dark-bellied brent goose, teal, ringed plover and black-tailed godwit.

To maintain*, in favourable condition , the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- saltmarsh
- intertidal mudflats and sandflats
- mixed sediment shores

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

King's Quay Shore

To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- saltmarsh
- intertidal mudflats and sandflats

+ dark-bellied brent goose and teal.

To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- saltmarsh
- intertidal mudflats and sandflats

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

Lee-on-the-Solent to Itchen estuary

To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- Estuarine habitats
- intertidal mudflats and shingle
- coastal and inundation grasslands
+ Dark-bellied Brent Goose, Teal, Ringed Plover and Black-tailed Godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- Estuarine habitats
- intertidal mudflats and shingle
- coastal and inundation grasslands
- reedbeds
*maintenance implies restoration if the feature is not currently in favourable condition.

Lincegrove to Hackett's Marshes
To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- Estuarine and marginal habitats
+ dark-bellied brent goose, teal, ringed plover and black-tailed godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- Estuarine and marginal habitats
*maintenance implies restoration if the feature is not currently in favourable condition.

Lower Test Valley
To maintain*, in favourable condition, the habitats for the populations of migratory bird species +of European importance, with particular reference to:
- marshy grassland/fen meadow
- grazed swamp
- reedbed
- saltmarsh
+ dark-bellied brent goose, teal ringed plover and black-tailed godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- marshy grassland/fen meadow
- grazed swamp
- reedbed
- saltmarsh.
*maintenance implies restoration if the feature is not currently in favourable condition.

Newtown Harbour
To maintain*, in favourable condition, the habitats for the populations of Annex 1 species + of European importance, with particular reference to:
- shingle
- saltmarsh
- intertidal mudflats and sandflats
- shallow coastal waters

+ Sandwich tern, Common tern, Mediterranean Gull
To maintain*, in favourable condition, the habitats for populations of migratory bird species + of European importance, with particular reference to:
- coastal grassland
- standing water
- saltmarsh
- intertidal mudflats and sandflats
+ dark-bellied brent goose, teal, ringed plover and black-tailed godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- coastal grassland
- standing water
- saltmarsh
- intertidal mudflats and sandflats
*maintenance implies restoration if the feature is not currently in favourable condition.

North Solent
To maintain*, in favourable condition , the habitats for the populations of Annex 1 species + of European importance, with particular reference to:
- standing water
- shallow coastal waters
- shingle
- saltmarsh
- intertidal mudflats and sandflats
+ mediterranean gull, sandwich tern, roseate tern, common tern and little tern.
To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- coastal grassland
- standing water
- saltmarsh
- intertidal mudflats and sandflats
+ dark-bellied brent goose, teal, ringed plover and black-tailed godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- coastal grassland
- standing water
- saltmarsh
- intertidal mudflats and sandflats
*maintenance implies restoration if the feature is not currently in favourable condition.

Thorness Bay
To maintain*, in favourable condition, the habitats for the populations of migratory bird species of European importance, with particular reference to:
- coastal grassland
- standing water
- saltmarsh
- reedbeds
- intertidal mudflats and sandflats

- mixed sediment shores
+ Dark-bellied brent goose, teal, ringed plover, black-tailed godwit
to maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- coastal grassland
- standing water
- saltmarsh
- reedbeds
- intertidal mudflats and sandflats
- mixed sediment shores
*maintenance implies restoration if the feature is not currently in favourable condition.

Upper Hamble estuary and woods
To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- Estuarine and marginal habitats
+ dark-bellied brent goose, teal, ringed plover and black-tailed godwit.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- Estuarine and marginal habitats
*maintenance implies restoration if the feature is not currently in favourable condition.

Whitecliff Bay and Bembridge Ledges
To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
- intertidal mudflats and sandflats
- boulder and cobble shores
+ dark-bellied brent goose and ringed plover.
To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:
- intertidal mudflats and sandflats
- boulder and cobble shores
*maintenance implies restoration if the feature is not currently in favourable condition.

New Forest SAC

conservation objectives:

Langley Wood and Homan's Copse
To maintain*, in favourable condition, the:
- Alluvial forests with Alnus glutinosa and Fraxinus exclesior (Alno-Padion, Alnion incanae, Salicion albae)
* maintenance implies restoration if the feature is not currently in favourable condition.

Loosehanger Copse and Meadows
To maintain*, in favourable condition, the:
- Alluvial forests with Alnus glutinosa and Fraxinus exclesior (Alno-Padion, Alnion incanae, Salicion albae)
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
* maintenance implies restoration if the feature is not currently in favourable condition.

White Parish Common
To maintain*, in favourable condition, the:
- Asperulo-Fagetum beech forests
- Old acidophilous oak woods with Quercus robur on sandy plains
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
- Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici -Fagenion)
To maintain*, in favourable condition, the habitats for the population of:
- Stag beetle (Lucanus cervus)
* maintenance implies restoration if the feature is not currently in favourable condition.

The New Forest
To maintain*, in favourable condition, the:
- Alkaline fens
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanaem Salicion albae)
- Asperulo-Fagetum beech forests
- Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)
- Bog woodland
- Depressions on peat substrates of the Rhyncosporion
- European dry heath
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
- North Atlantic wet heaths with Erica tetralix
- Old acidophilous oak woods with Quercus robur on sandy plains
- Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and or of the Isoeto-Naonjuncetea
- Oligotrophic waters containing very few minerals of sandy plains: Littorelletalia uniflora
- Transition mires and quaking bogs
To maintain*, in favourable condition, the habitats for the population of:
- Great crested newt (Triturus cristatus)
- Southern damselfly (Coenagrion mercuriale)
- Stag beetle (Lucanus cervus)
* maintenance implies restoration if the feature is not currently in favourable condition.

Landford Bog
To maintain*, in favourable condition, the:
- Depressions on peat substrates of the Rhyncosporion
To maintain*, in favourable condition, the habitats for the population of:
- Southern damselfly (Coenagrion mercuriale)
* maintenance implies restoration if the feature is not currently in favourable

condition.

New Forest SPA

conservation objectives:

The New Forest
To maintain*, in favourable condition, the habitats for the populations of Annex 1 bird species+ of European importance, with particular reference to:
- dry heathland
- dry grassland
- inclosure and pasture woodlands

Notes

+ Honey Buzzard, Nightjar, Woodlark, Dartford Warbler, Hen Harrier
***** maintenance implies restoration if the feature is not currently in favourable condition.