

New Forest National Park Authority **Park Management Plan HRA**

Habitat Regulations Assessment
January 2010



New Forest National Park Authority



Revision Schedule

Park Management Plan – HRA Report January 2010

Rev	Date	Details	Prepared by	Reviewed by	Approved by
01	07/10/2009	HRA Report	Dr Graeme Down Ecologist	Dr James Riley Principal Ecologist	Dr James Riley Principal Ecologist
02	18/12/09	Updated HRA Report	Dr Graeme Down Ecologist	Dr James Riley Principal Ecologist	Dr James Riley Principal Ecologist
03	25/01/10	Final HRA Report	Dr Graeme Down Ecologist	Dr James Riley Principal Ecologist	Dr James Riley Principal Ecologist

This document has been prepared in accordance with the scope of Scott Wilson's appointment with its client and is subject to the terms of that appointment. Scott Wilson accepts no liability for any use of this document other than for the purposes for which it was prepared and provided. Any advice, opinions, or recommendations within this document should be read and relied upon only in the context of the document as a whole. The contents of this document do not provide legal or tax advice or opinion.

© Scott Wilson Ltd 2009

Scott Wilson
Scott House
Alencon Link
Basingstoke
Hampshire
RG21 7PP

Tel 01256 310200
Fax 01256 310201

Table of Contents

1	Introduction	1
1.1	Current Legislation	1
1.2	Scope and Objectives	1
1.3	This Report.....	2
1.4	New Forest Park Management Plan.....	2
2	Methodology	4
2.1	Introduction.....	4
2.2	A Proportionate Assessment.....	4
2.3	The Process of HRA.....	5
2.4	Scoping Exercise.....	6
2.5	Stage 1: Likely Significant Effects (Screening).....	6
2.6	Technical Scope.....	7
2.7	The ‘in combination’ scope.....	7
3	Pathways of Impact.....	10
3.1	Introduction.....	10
3.2	Recreational Pressure.....	11
3.3	Air Quality.....	17
4	Mottisfont Bats SAC.....	18
4.1	Introduction.....	18
4.2	Reasons for Designation	18
4.3	Historic Trends and Current Pressures	18
4.4	Likely Significant Effects of the Park Management Plan	19
5	New Forest SAC, SPA and Ramsar.....	21
5.1	Introduction.....	21
5.2	Reasons for Designation	22
5.3	Historical Trends and Current Pressures	24
5.4	Likely Significant Effects of the Park Management Plan	25
6	Solent European Sites	28
6.1	Introduction.....	28
6.2	Reasons for Designation	28
6.3	Historic Trends and Current Pressures	30
6.4	Likely Significant Effects of the Park Management Plan	33



7 Conclusions 37
7.1 Conclusions 37
Appendix 1: Summary of Park Management Plan Objectives..... 38

1 Introduction

1.1 Current Legislation

- 1.1.1 The need for Habitat Regulations Assessment is set out within Article 6 of the EC Habitats Directive 1992, and interpreted into British law by Regulation 48 of the Conservation (Natural Habitats &c) Regulations 1994 (as amended in 2007). Under these Regulations, land use plans must be subject to Appropriate Assessment if they are likely to have a significant [adverse] effect on a Natura 2000 site (Special Areas of Conservation, SACs and Special Protection Areas, SPAs). It is Government policy (as described in Planning Policy Statement 9: Biodiversity & Geological Conservation) for sites designated under the Convention on Wetlands of International Importance (Ramsar sites) to be treated as having equivalent status to Natura 2000 sites. As such, Appropriate Assessments should also cover these sites.
- 1.1.2 The Habitats Directive applies a precautionary approach to protected areas; plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. In the case of the Habitats Directive, plans and projects may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.
- 1.1.3 In order to ascertain whether or not site integrity will be affected, an HRA should be undertaken of the plan or project in question.

Habitats Directive 1992

Article 6 (3) states that:

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.”

Conservation (Natural Habitats &c. Regulations) 1994 (as amended)

Regulation 48 states that:

“A competent authority, before deciding to ... give any consent for a plan or project which is likely to have a significant effect on a European site ... shall make an appropriate assessment of the implications for the site in view of that sites conservation objectives”.

1.2 Scope and Objectives

- 1.2.1 Scott Wilson has been appointed by the New Forest National Park Authority to assist in undertaking a Habitats Regulation Assessment of the potential effects of the National Park Management Plan (PMP) on the Natura 2000 network. An initial screening exercise was undertaken by the National Park Authority in 2008 and was subject to consultation. The report concluded that only one proposed policy could not be ‘screened out’ as being unlikely to lead to significant adverse effects. However, several circumstances have changed since that report was produced:

- The Park Plan has been revised following consultation and separated into its two separate elements – the Park Management Plan and the Core Strategy;
 - Natural England confirmed in their consultation response that in their view it was not possible to ‘screen out’ the Park Plan with regard to the potential for adverse effects on the New Forest SPA, New Forest SAC, Solent Maritime SAC and Solent & Southampton Water SPA. This was principally due to the potential for recreational pressure when users arising from within the New Forest were considered ‘in combination’ with visitors arising from outside the New Forest (particularly from within a 20km radius). Natural England also indicated that the potential for adverse effects on foraging/commuting barbastelle bats arising from the roost at Mottisfont Bats SAC should be screened, given that the distances over which barbastelles are known to commute to forage would place the New Forest within their foraging zone.
- 1.2.2 Given this information it is necessary to a) undertake an Appropriate Assessment and devise avoidance/mitigation policies where necessary to investigate adverse effects on the New Forest SAC, New Forest SPA, Solent Maritime SAC and Solent & Southampton Water SPA and b) subject the revised policies in both the Park Management Plan and Core Strategy to screening, followed if necessary by further Appropriate Assessment.

1.3 This Report

- 1.3.1 This report focuses on the Park Management Plan and has a two-fold purpose:
- To carry out a screening assessment of the Park Management Plan;
 - To take forward any objectives for Appropriate Assessment, as required.
- 1.3.2 Chapter 3 of this report summarises the possible pathways by which adverse effects on European protected sites could arise (focusing on mechanisms highlighted by natural England in consultation on the draft combined Management Plan in 2008). Chapters 4-6 consider the European sites that may be vulnerable, and a screening exercise to determine Likely Significant Effects of PMP objectives is performed, based on key environmental conditions required to maintain the integrity of these sites. The screening exercise for each site concludes by either screening out any possible impacts or by determining that mitigation or avoidance measures are required. Where mitigation strategies are deemed necessary, potential approaches are discussed. The conclusions reached are summarised in Chapter 7.

1.4 New Forest Park Management Plan

- 1.4.1 In 2008, the New Forest National Park Authority issued a draft National Park Plan for consultation. This plan was commented on by Natural England, and a HRA screening exercise undertaken. However, the Plan has since been rewritten and disaggregated into two discrete documents (a Park Management Plan and a Core Strategy). The Park Management Plan provides aspirational objectives, rather than being a delivery strategy, and the focus of the Park Management Plan is to guide and co-ordinate the work of all those with an interest in the Park in delivering the National Park purposes and duty. The Management Plan does not include planning or development control policies. These will be part of the Core Strategy for the National Park, produced by the National Park Authority as part of its function as a local planning authority. It should also be noted that many of the actions recommended within the

PMP are dependent on others, and will have connectivity with the emerging Core Strategy and other relevant documents, such as the Recreation Management Strategy.

1.4.2 The Objectives of the PMP are summarised in Appendix 1.

2 Methodology

2.1 Introduction

2.1.1 This section sets out our approach and methodology for undertaking the HRA.

2.2 A Proportionate Assessment

2.2.1 Project-related HRA often requires bespoke survey work and novel data generation in order to accurately determine the significance of adverse effects; in other words, to look beyond the risk of an effect to a justified prediction of the actual likely effect and to the development of avoidance or mitigation measures.

2.2.2 However, the draft CLG guidance¹ makes it clear that when implementing HRA of land-use plans, the AA should be undertaken at a level of detail that is appropriate and proportional to the level of detail provided within the plan itself:

2.2.3 *“The comprehensiveness of the [Appropriate] assessment work undertaken should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects [of a strategic land use plan] in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project.”*

2.2.4 In other words, there is a tacit acceptance that appropriate assessment can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers (**Figure 1**). The HRA was therefore undertaken using existing data and without undertaking bespoke surveys or detailed modelling.

2.2.5 Inevitably, there will be an absence of fine detail in the Park Management Plan since the purpose of such a document is to provide a broad framework. The most robust and defensible approach to the absence of fine grain detail at this level is to make use of a precautionary approach in assessing the objectives of this plan. In other words, the plan is never given the benefit of the doubt; it must be assumed that an objective/measure is likely to have an impact leading to a significant adverse effect upon a European site unless it can be clearly established otherwise.

¹ CLG (2006) Planning for the Protection of European Sites, Consultation Paper

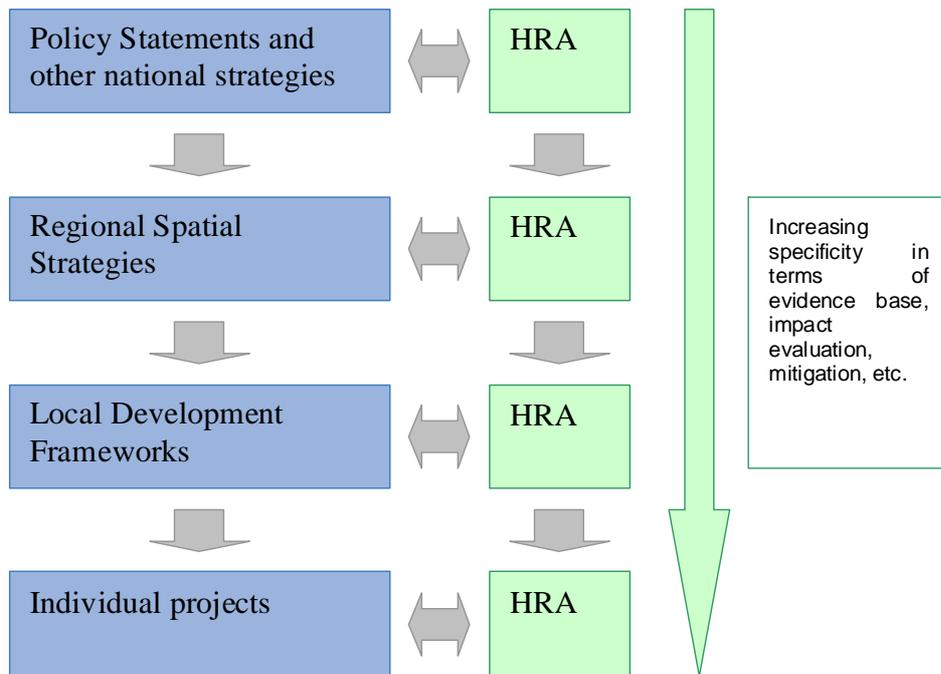


Figure 1: Tiering in HRA of Land Use Plans

2.3 The Process of HRA

- 2.3.1 The HRA has been carried out in the continuing absence of formal Government guidance. CLG released a consultation paper on AA of Plans in 2006². As yet, no further formal guidance has emerged.
- 2.3.2 **Figure 2** below outlines the stages of HRA according to current draft CLG guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the plan until no significant adverse effects remain.

² CLG (2006) Planning for the Protection of European Sites, Consultation Paper

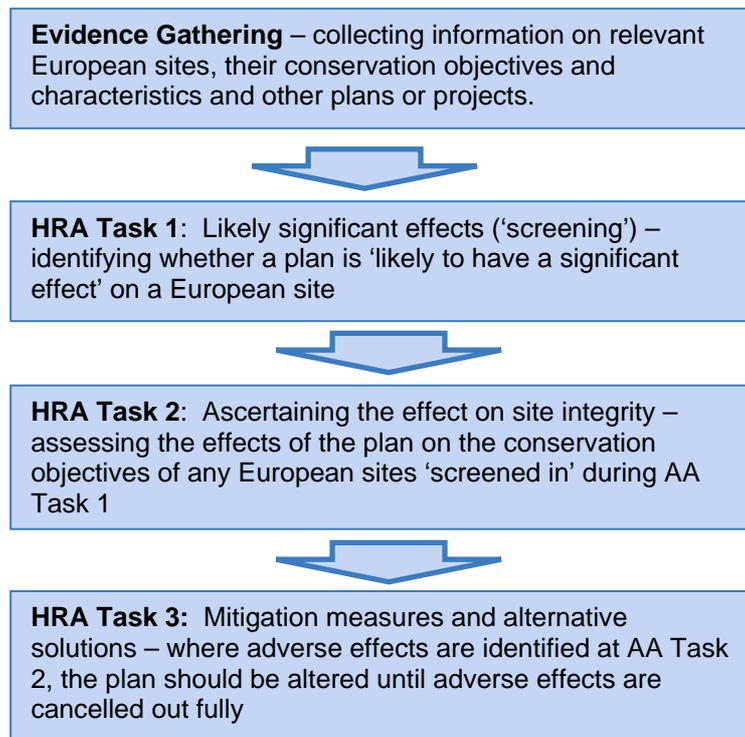


Figure 2: Four-Stage Approach to Habitat Regulations Assessment

2.3.3 In practice, this broad outline requires some amendment in order to feed into a developing land use plan such as a Park Management Plan.

2.4 Scoping Exercise

2.4.1 The scope of the HRA process was set out in a Scott Wilson scoping report (September 2009). Subsequently, an initial appraisal of the PMP approaches (defined as Objectives) was performed, and this will be used as the basis for the screening stage of the HRA. The European sites discussed in this report, and their relation to the New Forest National Park, are depicted on Figure 3.

2.5 Stage 1: Likely Significant Effects (Screening)

2.5.1 The first stage of any Habitat Regulations Assessment is a Likely Significant Effect (LSE) test - essentially a risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

2.5.2 *"Is the Plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?"*

- 2.5.3 The objective is to ‘screen out’ those plans and projects that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon European sites, usually because there is no mechanism for an adverse interaction with European sites.

2.6 Technical Scope

2.6.1 Sources of evidence that we have accessed for this appropriate assessment include:

- HRA Screening Report for the draft National Park Plan;
- The PUSH South Hampshire Green Infrastructure Strategy;
- Emerging work being undertaken by the Partnership for Urban South Hampshire regarding researching and managing recreational pressure within the Solent European sites;
- The HRA of the South East RSS (including Proposed Changes);
- European Site Management and Access Management Plans where available;
- Sharp, J., Lowen, J. & Liley, D. (2008) ‘*Recreational pressure on the New Forest National Park, with particular reference to the New Forest SPA*’;
- National Park Recreation Management Strategy (2008 Consultation Draft);
- Nature on the Map and its links to SSSI citations and the JNCC website (www.natureonthemap.org.uk).

2.6.2 The New Forest is an exceptional site in that work undertaken by Footprint Ecology and others has specifically investigated the impact of recreation on the New Forest SPA (in particular). Given the heathland interest features of the SAC we have drawn upon the following reports:

- Liley, D. & Clarke, R. T. (2003). The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation*, 114, 219 - 230.
- Liley, D. and R.T. Clarke (2002). Urban development adjacent to heathland sites in Dorset: the effect on the density and settlement patterns of Annex 1 bird species. *English Nature Research Reports*, No. 463. Peterborough: English Nature (now Natural England).
- Murison, G. (2002). The impact of human disturbance on the breeding success of nightjar *Caprimulgus europaeus* on heathlands in south Dorset, England. *English Nature Research Reports*, No. 483. Peterborough: English Nature (now Natural England).
- Rose, R.J. and R.T. Clarke (2005). Urban impacts on Dorset Heathlands: Analysis of the heathland visitor questionnaire survey and heathland fires incidence data sets. *English Nature Research Reports*, No. 624. Peterborough: English Nature (now Natural England).
- Underhill-Day, J.C. (2005). A literature review of urban effects on lowland heaths and their wildlife. *English Nature Research Reports*, No. 623. Peterborough: English Nature (now Natural England).

2.7 The ‘in combination’ scope

2.7.1 It is neither practical nor necessary to assess the ‘in combination’ effects of the PMP within the context of all other plans and projects within South Hampshire and east Dorset. In practice

therefore, in combination assessment is of most relevance when the plan would otherwise be screened out because its individual contribution is inconsequential. For the purposes of this assessment, we have determined that, due to the nature of the identified impacts, the key other plans and projects relate to the additional housing, transportation and commercial/industrial allocations proposed for neighbouring authorities over the lifetime of the Plan.

2.7.2 The following plans and projects were identified for consideration ‘in combination’ at the screening stage for the National Park Plan in 2008:

- Integrated Regional Framework (IRF) for the South East 2004
- South East Plan (2009)
- Draft South West Plan (2006)
- Hampshire County Structure Plan (remaining saved policies)
- Wiltshire County Structure Plan
- Strategic Guidance for the Solent (Solent Forum)
- Hampshire, Portsmouth, Southampton, and New Forest National Park Minerals and Waste Local Development Framework ‘Core Strategy’
- Test Valley Borough Local Plan
- New Forest District Local Plan
- Replacement Salisbury District Local Plan
- Southampton Water and Western Solent Shoreline Management Plan
- Solent European Marine Sites (SEMS) Management Plan
- Crown Lands Draft Management Plan (2008)
- Cranborne Chase and West Wiltshire Downs AONB Management Plan
- New Forest Catchment Abstraction Management Strategy
- Hampshire Avon Catchment Abstraction Management Strategy March 2006
- City of Southampton Local Plan
- Dorset County Structure Plan
- East Dorset Local Plan
- Christchurch Local Plan
- Poole & Christchurch Bays Shoreline Management Plan
- Bournemouth District Wide Local Plan
- Bournemouth Airport Master Plan
- Southampton Airport Master Plan

2.7.3 The Regional Spatial Strategies for the South East and South West provide a good introduction to proposals for areas surrounding the National Park.

Table 1. Housing levels to be delivered within South Hampshire, East Dorset and Salisbury under the South East Plan and draft revised South West Plan (incorporating the Secretary of State's Proposed Changes)

<i>Local Authority</i>	<i>Annual housing average</i>	<i>Total housing from 2006 to 2026</i>
South Hampshire	4,000	80,000
Eastleigh	354	7,080
East Hampshire	260	5,200
Fareham	186	3,720
Fareham SDA	500	10,000
Gosport	125	2,500
Havant	315	6,300
New Forest	196	3,920
New Forest National Park	11	220
Portsmouth	735	14,700
Southampton	815	16,300
Test Valley	501	10,020
Winchester	612	12,240
East Dorset	2,405	48,100
Bournemouth	805	16,100
Poole	500	10,000
Christchurch	172	3,450
East Dorset	320	6,400
Purbeck	257	5,150
North Dorset	350	7,000
Salisbury	620	12,400

3 Pathways of Impact

3.1 Introduction

3.1.1 Thirteen European sites were included within the scope of the screening of the combined Park Plan in 2008 and of these likely significant effects on seven were screened out, since there was no potential pathway to connect the combined Park Plan with those sites. The seven sites screened out were:

- River Avon SAC: the 2008 screening concluded that spatial focus of development within the New Forest will mean effects on the River Avon sites are unlikely as they do not derive water supplies from Avon sources.
- Avon Valley SPA and Ramsar: the 2008 screening concluded that spatial focus of development within the New Forest will mean effects on the River Avon sites are unlikely as they do not derive water supplies from Avon sources.
- Dorset Heathlands SAC, SPA and Ramsar: the 2008 screening concluded that the focus of development within the New Forest will mean that recreational impacts upon these sites are unlikely.
- Solent and Isle of Wight Lagoons SAC: the 2008 screening concluded that policies within the National Park Plan were not likely to exacerbate any adverse water quality effects on this site or compromise the ability for the necessary compliance with discharge controls due to the low level of development provided for in the Plan and its location away from the area served by the relevant Treatment Works.

3.1.2 In consultation, Natural England did not raise objections to the screening out of these sites, with the exception of Solent and Isle of Wight Lagoons SAC, due to possible impacts on freshwater/brackish habitats. The PMP does not contain objectives that are likely to result in any impacts on the sensitive features of the SAC, since the PMP does not deliver development.

3.1.3 Following the issue of the Park Management Plan document, the six sites for which significant effects could not be deemed unlikely are taken forward for screening in this report. They are:

- New Forest SAC, SPA and Ramsar sites
- Solent Maritime SAC
- Southampton and Solent Water SPA and Ramsar sites

3.1.4 Following advice from Natural England in their response to the consultation on the original National Park Plan in 2008, Mottisfont Bats SAC has been included in the most recent screening exercise.

3.1.5 In carrying out an HRA it is important to determine the various ways in which land use plans can impact on European sites by following the pathways along which development can be connected with European sites, in some cases many kilometres distant. Briefly defined, pathways are routes by which a change in activity associated with a development can lead to an effect upon a European site.

3.1.6 The following conclusions from the 2008 assessment were borne in mind primarily as the following issues on the following sites could not be considered unlikely to lead to significant adverse effects:

- The Footprint Ecology report³ identified that the increase in visitor numbers within (and from within 20km of) the National Park is likely to be significant between now and 2026. As such, recreational pressure on the interest features of the New Forest SAC and SPA (particularly the SPA features) arising from an increase in visitors to the National Park (primarily an ‘in combination’ impact within the context of increased populations across the South Hampshire sub-region) is the key element of any potential for adverse effects on European sites;
- Recreational pressure on the interest features of the Solent Maritime SAC and Solent & Southampton Water SPA/Ramsar arising from an increase in visitors to the National Park (primarily an ‘in combination’ impact within the context of increased populations across the South Hampshire sub-region) also needs to be considered;
- ‘Urbanisation’ effects on the New Forest SAC and SPA (i.e. any probable increase in cat populations associated with new development within the National Park) are relevant, although their relevance will primarily be related to the Core Strategy (as this is the document that will deliver development and development control policies/mechanisms). The Core Strategy will be subject to a separate HRA report; and
- The potential for interruption of commuting routes and possible disruption of foraging for barbastelle bats arising from the Mottisfont Bats SAC, as Natural England expressed concern that parts of the New Forest do lie within the possible foraging zone for these species.

3.1.7 Evaluation of the PMP has identified that there is no mechanism whereby the PMP objectives could lead to urbanisation, water resource/quality or coastal squeeze impacts on internationally designated sites, since the PMP does not deliver development. The pathways of impact requiring further consideration for all European sites in this report is that of increased recreational pressure and the likelihood of increasing numbers of recreational visits by car and the possible contribution of this to local deterioration in air quality. The remainder of this chapter discusses the background to these potential sources of impact. An assessment is then made in each of Chapters 4-6 as to whether these effects are likely to occur as a result of the Park Management Plan.

3.1.8 It should be noted that the pathways discussed below are general pathways of impact established from literature review and by which adverse effects on sensitive habitats can result and which therefore need to be considered in the National Park. Further site-specific studies would be needed to actually guide the details of management in the National Park.

3.2 Recreational Pressure

Mechanical erosion

3.2.1 Most types of aquatic or terrestrial European site can be affected by excessive levels of recreational activity. For example, there have been several papers published that empirically

³ Sharp, J., Lowen, J. & Liley, D (2008). Changing patterns of visitor numbers within the New Forest National Park, with particular reference to the New Forest SPA. Footprint Ecology

demonstrate that damage to vegetation in woodlands and other habitats can be caused by high volumes of recreational users. While these are not directly applicable to the New Forest they do clearly demonstrate that trampling can be an issue for sensitive habitats:

- Wilson & Seney (1994)⁴ examined the degree of track erosion caused by hikers, motorcycles, horses and cyclists from 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.
- Cole et al (1995a, b)⁵ conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each tramped between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and an inverse relationship with trampling intensity was discovered, although this relationship was weaker after one year than two weeks indicating some recovery of the vegetation. Differences in plant morphological characteristics were found to explain more variation in response between different vegetation types than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. Cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks, but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were least resilient to trampling. It was concluded that these would be the least tolerant of a regular cycle of disturbance.
- Cole (1995c)⁶ conducted a follow-up study (in 4 vegetation types) in which shoe type (trainers or walking boots) and trampler weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier trampers caused a greater reduction in vegetation height than lighter trampers, but there was no difference in effect on cover.
- Cole & Spildie (1998)⁷ experimentally compared the effects of off-track trampling by hiker and horse (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Horse traffic was found to cause the largest reduction in vegetation cover. The forb-dominated vegetation suffered greatest disturbance, but recovered rapidly. Higher trampling intensities caused more disturbance

⁴ Wilson, J.P. & J.P. Seney. 1994. Erosional impact of hikers, horses, motorcycles and off road bicycles on mountain trails in Montana. *Mountain Research and Development* 14:77-88

⁵ Cole, D.N. 1995a. Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. *Journal of Applied Ecology* 32: 203-214

Cole, D.N. 1995b. Experimental trampling of vegetation. II. Predictors of resistance and resilience. *Journal of Applied Ecology* 32: 215-224

⁶ Cole, D.N. 1995c. Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.

⁷ Cole, D.N., Spildie, D.R. 1998. Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management* 53: 61-71

Disturbance of Wildlife

- 3.2.2 Concern regarding the effects of disturbance on birds in particular, stems from the fact that they are expending energy unnecessarily and the time they spend responding to disturbance is time that is not spent feeding⁸. Disturbance therefore risks increasing energetic output while reducing energetic input, which can adversely affect the 'condition' and ultimately survival of the birds. In addition, displacement of birds from one feeding site to others can increase the pressure on the resources available within the remaining sites, as they have to sustain a greater number of birds.⁹ Moreover, the more time a breeding bird spends disturbed from its nest, the more its eggs are likely to cool and the more vulnerable they are to predators. Finally, regular disturbance can also render some areas of otherwise suitable habitat unavailable for nesting such that breeding territories fail to be established or are limited to sub-optimal habitat.
- 3.2.3 The potential for disturbance may be less in winter than in summer, in that there are often a smaller number of recreational users and birds are not breeding. However, winter activity can still cause important disturbance, especially as birds are particularly vulnerable at this time of year due to food shortages. Several empirical studies have, through correlative analysis, demonstrated that out-of-season recreational activity can result in quantifiable disturbance:
- Tuite et al¹⁰ found that during periods of high recreational activity, bird numbers at Llangorse Lake decreased by 30% over a time period correlating with an increase in recreational activity. During periods of low recreational activity, however, no such correlation was observed. In addition, all species were found to spend less time in their 'preferred zones' (the areas of the lake used most in the absence of recreational activity) as recreational intensity increased.
 - Underhill et al¹¹ counted waterfowl and all disturbance events on 54 water bodies within the South West London Water bodies Special Protection Area and clearly correlated disturbance with a decrease in bird numbers at weekends in smaller sites and with the movement of birds within larger sites from disturbed to less disturbed areas.
 - Evans & Warrington¹² found that on Sundays total water bird numbers (including shoveler and gadwall) were 19% higher on Stocker's Lake LNR in Hertfordshire, and attributed this to displacement of birds resulting from greater recreational activity on surrounding water bodies at weekends relative to week days. However, recreational activity was not quantified in detail, nor were individual recreational activities evaluated separately.
 - Tuite et al¹³ used a large (379 site), long-term (10-year) dataset (September – March species counts) to correlate seasonal changes in wildfowl abundance with the presence of various recreational activities. They found that shoveler was one of the most sensitive

⁸ Riddington, R. et al. 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* 43:269-279

⁹ Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72

¹⁰ Tuite, C. H., Owen, M. & Paynter, D. 1983. Interaction between wildfowl and recreation at Llangorse Lake and Talybont Reservoir, South Wales. *Wildfowl* 34: 48-63

¹¹ Underhill, M.C. et al. 1993. *Use of Waterbodies in South West London by Waterfowl. An Investigation of the Factors Affecting Distribution, Abundance and Community Structure.* Report to Thames Water Utilities Ltd. and English Nature. Wetlands Advisory Service, Slimbridge

¹² Evans, D.M. & Warrington, S. 1997. The effects of recreational disturbance on wintering waterbirds on a mature gravel pitlake near London. *International Journal of Environmental Studies* 53: 167-182

¹³ Tuite, C.H., Hanson, P.R. & Owen, M. 1984. Some ecological factors affecting winter wildfowl distribution on inland waters in England and Wales and the influence of water-based recreation. *Journal of Applied Ecology* 21: 41-62

species to disturbance. The greatest impact on winter wildfowl numbers was associated with sailing/windsurfing and rowing.

- 3.2.4 Human activity can affect birds either directly (e.g. through causing them to flee) or indirectly (e.g. through damaging their habitat). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to behavioural changes (e.g. alterations in feeding behaviour, avoidance of certain areas *etc.*) and physiological changes (e.g. an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects by altering the balance between immigration/birth and emigration/death.¹⁴
- 3.2.5 The degree of impact that varying levels of noise will have on different species of bird is poorly understood except that a number of studies have found that an increase in traffic levels on roads does lead to a reduction in the bird abundance within adjacent hedgerows - Reijnen et al (1995) examined the distribution of 43 passerine species (i.e. 'songbirds'), of which 60% had a lower density closer to the roadside than further away. By controlling vehicle usage they also found that the density generally was lower along busier roads than quieter roads¹⁵.
- 3.2.6 Activity will often result in a flight response (flying, diving, swimming or running) from the animal that is being disturbed. This carries an energetic cost that requires a greater food intake. Research that has been conducted concerning the energetic cost to wildlife of disturbance indicates a significant negative effect.
- 3.2.7 Disturbing activities are on a continuum. The most disturbing activities are likely to be those that involve irregular, infrequent, unpredictable loud noise events, movement or vibration of long duration. Birds are least likely to be disturbed by activities that involve regular, frequent, predictable, quiet patterns of sound or movement or minimal vibration. The further any activity is from the birds, the less likely it is to result in disturbance.
- 3.2.8 The factors that influence a species response to a disturbance are numerous, but the three key factors are species sensitivity, proximity of disturbance sources and timing/duration of the potentially disturbing activity.

Sensitivity of species – waterfowl

- 3.2.9 The distance at which a species takes flight when approached by a disturbing stimulus is known as the 'tolerance distance' (also called the 'escape flight distance') and differs between species to the same stimulus and within a species to different stimuli. These are given in Table 2, which compiles 'tolerance distances' from across the literature. It is reasonable to assume from this that disturbance is unlikely to be experienced more than a few hundred metres from the birds in question. In addition, the regular mechanized noise that is associated with waste sites is likely to be less disturbing than the presence of visible human activity in areas in which the birds are not used to observing such activity.

Table 2 - Tolerance distances of 21 water bird species to various forms of recreational disturbance, as described in the literature. All distances are in metres. Single figures are mean distances; when means

¹⁴ Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

¹⁵ Reijnen, R. et al. 1995. The effects of car traffic on breeding bird populations in woodland. III. Reduction of density in relation to the proximity of main roads. *Journal of Applied Ecology* 32: 187-202

are not published, ranges are given. ¹ Tydeman (1978), ² Keller (1989), ³ Van der Meer (1985), ⁴ Wolff et al (1982), ⁵ Blankestijn et al (1986).¹⁶

Species	Type of disturbance		
	Rowing boats/kayak	Sailing boats	Walking
Little grebe		60 – 100 ¹	
Great crested grebe	50 – 100 ²	20 – 400 ¹	
Mute swan		3 – 30 ¹	
Teal		0 – 400 ¹	
Mallard		10 – 100 ¹	
Shoveler		200 – 400 ¹	
Pochard		60 – 400 ¹	
Tufted duck		60 – 400 ¹	
Goldeneye		100 – 400 ¹	
Smew		0 – 400 ¹	
Moorhen		100 – 400 ¹	
Coot		5 – 50 ¹	
Curlew			211 ³ ; 339 ⁴ ; 213 ⁵
Shelduck			148 ³ ; 250 ⁴
Grey plover			124 ³
Ringed plover			121 ³
Bar-tailed godwit			107 ³ ; 219 ⁴
Brent goose			105 ³
Oystercatcher			85 ³ ; 136 ⁴ ; 82 ⁵
Dunlin			71 ³ ; 163 ²

3.2.10 The Solent Forum is undertaking a project to examine bird disturbance and possible mitigation in the Solent area¹⁷. A Phase 1 report has outlined the existing visitor data for the Solent, canvassed expert opinion on recreational impacts on birds, and assessed current available data on relevant species. Phase II will assess the impact of current visitor numbers and activities on the survival rates of shorebirds throughout the Solent. Phase III will predict the impact of future changes in housing density and assess associated mitigation measures on the

¹⁶ Tydeman, C.F. 1978. *Gravel Pits as conservation areas for breeding bird communities*. PhD thesis. Bedford College

Keller, V. 1989. Variations in the response of Great Crested Grebes *Podiceps cristatus* to human disturbance - a sign of adaptation? *Biological Conservation* 49:31-45

Van der Meer, J. 1985. *De verstoring van vogels op de slikken van de Oosterschelde*. Report 85.09 Deltadienst Milieu en Inrichting, Middelburg. 37 pp.

Wolf, W.J., Reijnders, P.J.H. & Smit, C.J. 1982. The effects of recreation on the Wadden Sea ecosystem: many questions but few answers. In: G. Luck & H. Michaelis (Eds.), *Schriftenreihe M.E.L.F., Reihe A: Agnew. Wissensch* 275: 85-107

Blankestijn, S. et al. 1986. *Seizoensverbreding in de recreatie en verstoring van Wulp en Scholkester op hoogwatervluchplaatsen op Terschelling*. Report Projectgroep Wadden, L.H. Wageningen. 261pp.

¹⁷ Stillman, R., Cox, J., Liley, D., Ravenscroft, N., Sharp, J. & Wells, M. (2009). Solent disturbance and mitigation project:

Phase I report. Footprint Ecology, Jonathan Cox Associates, Bournemouth University, Biodiversity by Design.

number of people visiting the Solent, and the associated impact on the survival rates of shorebirds.

Sensitivity of species – heathland birds

- 3.2.11 The report by Footprint Ecology¹⁸ into visitor use of the New Forest, noted that nightjars, woodlark and Dartford warbler are present at markedly lower densities within the New Forest than sites including the Dorset Heaths SPA and Thames Basin Heaths SPA. The reasons for this were not clear. All three species were found to occur in areas of high visitor pressure, but there was some avoidance of the more highly disturbed areas by all three species. This avoidance was not enough to account for overall reduced densities.
- 3.2.12 Work by Liley and Clarke^{19 20} (2002, 2003) also found that the density of nightjar on heathland sites in Dorset was directly related to the amount of surrounding development; sites surrounded by a high amount of development supported fewer nightjars. A study of nightjars by Murison²¹ noted that nightjar breeding success differed between heavily visited sites and those with little public access. Breeding success and nest density was lower on sites with higher levels of use. The proximity of paths to the nest also correlated strongly with nest failure, up to 225m from the path edge. Murison also noted that the study appeared to show a strong link between increased site disturbance, higher predator numbers such as corvids on disturbed sites, and subsequent high predation rates of nightjar nests. Disturbance may have indirect impacts on breeding success of nightjar and other sensitive species as birds may be displaced from optimal habitat to less suitable areas where breeding success may be lower.
- 3.2.13 Woodlark also appears to be sensitive to disturbance. A study by Mallord (2005)²², referenced by Liley (2005)²³, on sixteen heathland sites in southern England found that density of woodlarks appeared to be correlated to disturbance levels, with lower densities where disturbance levels were higher. Overall Mallord estimated that if there was no disturbance on any of the sites, 34% more woodlark chicks would be raised (Liley, 2005).
- 3.2.14 Dartford Warblers are not ground nesting, unlike nightjar and woodlark, nesting and foraging instead in gorse bushes. Research by Murison²⁴ showed clear associations between Dartford warbler breeding parameters and levels of disturbance by humans and their pets.

¹⁸ Sharp, J., Lowen, J. & Liley, D (2008). Changing patterns of visitor numbers within the New Forest National Park, with particular reference to the New Forest SPA. Footprint Ecology

¹⁹ Liley, D. & Clarke, R. T. (2003) The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation*, 114, 219 - 230.

²⁰ Liley, D. & Clarke, R. T. (2002) The impact of human disturbance and urban development on key heathland bird species in Dorset. . Sixth National Heathland Conference (eds J. C. Underhill-Day & D. Liley). RSPB, Bournemouth.

²¹ Murison, G. (2002). The impact of human disturbance on the breeding success of nightjar *Caprimulgus europaeus* on heathlands in south Dorset, England, Rep. No. English Nature Research Report 483. English Nature, Peterborough.

²² Mallord J. (2005) Predicting the consequences of human disturbance, urbanisation and fragmentation for a woodlark *Lullula arborea* population. PhD Thesis, University of East Anglia, Norwich, UK.

²³ Liley, D. (2005) A summary of the evidence base for disturbance effects to Annex 1 bird species on the Thames Basin Heaths & research on human access patterns to heathlands in southern England. Footprint Ecology / English Nature.

²⁴ Murison, Giselle; Bullock, James M.; Underhill-Day, John; Langston, Rowena; Brown, Andrew F.; Sutherland, William J.. 2007 Habitat type determines the effects of disturbance on the breeding productivity of the Dartford Warbler *Sylvia undata*. *Ibis*, 149 (s1). 16-26

3.3 Air Quality

- 3.3.1 The habitats of the New Forest SAC are vulnerable to nutrient enrichment from atmospheric pollution, especially from vehicular emissions, which have demonstrable effects on habitat features up to 200m from source. Two hundred metres is the distance over which, in July 2006, when this issue was raised by Runnymede District Council in the South East, Natural England advised that their Local Development Framework '*can only be concerned with locally emitted and short range locally acting pollutants*'²⁵ as this is the only scale which falls within a local authority remit. According to the Department of Transport's Transport Analysis Guidance, "Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant"²⁶.

²⁵ English Nature (16 May 2006) letter to Runnymede Borough Council, 'Conservation (Natural Habitats &c.) Regulations 1994, Runnymede Borough Council Local Development Framework'.

²⁶ www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

4 Mottisfont Bats SAC

4.1 Introduction

4.1.1 The woodland habitat around Mottisfont supports an internationally important population of the rare barbastelle bat *Barbastella barbastellus*. It is the only known maternity roost in Hampshire and one of only six known sites in the UK (2002 data)²⁷.

4.1.2 Mottisfont contains a mix of woodland types including hazel coppice with standards, broadleaved plantation and coniferous plantation which the bats use for breeding, roosting, commuting and feeding. A total of nine bat species have been recorded at Mottisfont, the others being whiskered *Myotis mystacinus*, brown long-eared *Plecotus auritus*, the two pipistrelles *Pipistrellus pygmaeus* and *P. pipistrellus*, serotine *Eptesicus serotinus*, noctule *Nyctalus noctula*, Daubenton's *Myotis daubentonii* and Natterer's *Myotis nattererii*.

4.2 Reasons for Designation

4.2.1 The site is designated for its Habitats Directive Annex II species barbastelle bat (*Barbastella barbastellus*).

4.3 Historic Trends and Current Pressures

4.3.1 Approximately 70% of the site is owned by the National Trust and is open to public access. The National Trust has actively carried out woodland operations over recent years, including opening up coppice, gradually removing conifer plantations and replanting to native broadleaved woodland. A Woodland Grant Scheme which is targeted at restoration and general woodland management should enhance the habitats and ensure future sustainability. Twenty-five percent of the site is privately owned and not open to public access. The majority of this area is also subject to a Woodland Grant Scheme renewal which is targeted primarily at maintaining the rotational coppicing programme which should also ensure sustainability of woodland management. This part of the site is managed for rearing game birds.

4.3.2 In its most recent condition assessment exercise (2003, 2005)²⁸, Natural England determined that the whole site was in favourable condition.

4.3.3 The environmental requirements of the Mottisfont Bats SAC are not fully understood, due to incomplete understanding of barbastelle bat ecology, though continued woodland management practices will be important.

4.3.4 A study of the Mottisfont barbastelles²⁹ found that:

- Bats foraged up to 16km from the SAC, but that the average distance was 5km.
- Cluster polygons showing habitats visited by the bats did not seem to indicate regular foraging in the direction of the New Forest National Park.

²⁷ <http://www.jncc.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0030334>

²⁸ <http://www.sssi.naturalengland.org.uk/Special/sssi/>

²⁹ Davidson-Watts, I. & McKenzie, A. (2006). Habitat use and Ranging of Barbastelle Bats of the Mottisfont Estate, Hampshire. ID Wildlife Ltd.

- 4.3.5 Typical foraging distances for this species are 6-8km, though this may extend to reach 20km³⁰. At its closest point the SAC lies 6km from the edge of the New Forest National Park. A buffer zone of 7.5km radius around the SAC produced by Natural England (the distance over which NE would wish to be consulted over land use issues and development), has a small amount of overlap with the New Forest National Park (and the New Forest SAC).

4.4 Likely Significant Effects of the Park Management Plan

- 4.4.1 In their review of the 2008 combined New Forest National Park Plan document, Natural England commented that interruption of commuting routes and possible disruption of foraging for barbastelle bats might occur as parts of the New Forest do lie within the possible 8km foraging zone for this species and presents ideal habitat.

- 4.4.2 The expansion of housing and economic growth in South Hampshire and South East Dorset could lead to an estimated 8% increase (an additional 1.05 million visitor days) in people using the National Park for recreation by 2026³¹. The majority of recreation within the New Forest National Park takes place during daylight hours with 54% (based on visitor surveys) or 70% (based on household surveys) of respondents stating that their primary reason for visiting was walking or dog walking. Therefore there is limited potential for any conflicts of interest between park users and bats.

- 4.4.3 Objective 7 of the PMP seeks to enhance people's enjoyment and quality of experience within the National Park. Although the objective and supporting text discusses creation of more 'integrated' networks within the park, and safe access, citing for example, improved crossing points on major roads, which could encourage greater recreational pressure, there are a number of priority actions that offset the likelihood of this occurring:

- Agree and implement a Recreation Management Strategy for the National Park. This will involve consultation with Natural England.
- Agree the priorities for further research on recreational use and impacts. This will involve consultation with Natural England.
- One aim of the Objective is to ensure "*new recreational facilities are designed and located to avoid impacts on the special qualities of the area, including designated nature conservation sites...*".

- 4.4.4 Objective 2 of the PMP seeks to protect and enhance the large-scale cultural landscapes and semi-natural habitats of the New Forest. This objective includes the need:

- to encourage "*green infrastructure plans, including areas for countryside recreation close to new development outside the National Park, and seeking improvements to open space within the park*"; and
- for "*improving and sustaining the quality of internationally and nationally designated habitats through appropriate land management, and by monitoring and managing recreational pressure to avoid any adverse impacts.*"

³⁰ Greenaway F (2004) Advice for the management of flightlines and foraging habitats of the Barbastelle Bat *Barbastella barbastellus*, English Nature Research Report 657.

³¹ Sharp, J., Lowen, J. & Liley, D (2008). Changing patterns of visitor numbers within the New Forest National Park, with particular reference to the New Forest SPA. Footprint Ecology

-
- 4.4.5 The background wording indicates that protection and enhancement of the semi-natural habitats of the New Forest will require close working with surrounding authorities and delivery of ‘practical mitigation measures’ where impacts on European sites may result.
- 4.4.6 Objective 3 aims to encourage land management that sustains the special qualities of the National Park. One aspect of this objective is that it will provide “*co-ordinated land management advice relevant to the New Forest.*” A second component aims to encourage “*long-term plans to guide woodland management on privately owned land, including the restoration of ancient or indigenous woodland.*”
- 4.4.7 Additionally, Objective 5 aims to improve the quality of ‘dark skies’ within the National Park, which is likely to be of benefit to foraging barbastelles.
- 4.4.8 Taking into account the fact that the National Park lies on the periphery of the typical foraging range of barbastelle bats at Mottisfont SAC, the low recreational use of the park at times when bats will be foraging, and the fact that objectives will seek to deliver management that will maintain features of the park supporting habitats that bats use for foraging, it is possible to conclude that the PMP is unlikely to lead to significant adverse effects on Mottisfont Bats SAC. Even allowing for effects of development within surrounding authorities such as Test Valey and Winchester, there is no mechanism by which the PMP can contribute to any significant adverse impacts on the SAC.
- 4.4.9 Note that effects as a result of Core Strategy development and recommendations for development control policies will be investigated as part of the HRA of the Core Strategy.

5 New Forest SAC, SPA and Ramsar

5.1 Introduction

- 5.1.1 The New Forest embraces the largest area of ‘unsown’ vegetation in lowland England and includes the representation on a large scale of habitat formations formerly common but now fragmented and rare in lowland western Europe. They include lowland heath, valley and seepage step mire, or fen, and ancient pasture woodland, including riparian and bog woodland.
- 5.1.2 Older trees support the richest known woodland lichen flora in lowland Europe, and an exceptionally species-rich deadwood fauna. The woods are also rich in fungi that are specific to pasture woodland. The vascular plants include about 60 species associated with old woodland. These older trees also support a high density of hole nesting, insectivorous birds, and provide roost sites for several species of bat including the very rare Bechstein’s bat *Myotis bechsteinii*.
- 5.1.3 The silvicultural enclosures include 40% broad-leaved trees, mainly oak and beech, which, with the unenclosed woods, comprises the largest tract of native broad-leaved woodland in southern England.
- 5.1.4 The heathlands, including grass heaths and acid grasslands comprise a series of plant communities, the composition of which is related to soil structure and permeability and the effects of grazing.
- 5.1.5 The acid and neutral grasslands are strongly influenced by the underlying geology and by grazing. The acid grasslands are often quite extensive, relatively species-rich and comprise two main elements: (a) species which benefit from heavy grazing and are mostly prostrate or are able to survive in dwarf form and (b) species which are less palatable. The more neutral grasslands known locally as ‘lawns’ occur as linear features following many of the small streams, roadside verges around settlements and village greens, and as glades in association with pasture woodland.
- 5.1.6 The unimproved meadows in and around the Forest have similarities with the acid to neutral grasslands within the Open Forest. The frequent spring-lines and infertility of the soils have hindered agricultural improvement and these meadow communities are now rare or scarce in England.
- 5.1.7 The Forest contains about 90 clearly separable valley mires, or fen, within about 20 different valley systems. This is thought to be more than survive in the remainder of Britain and Western Europe. This suite of mires sits within a relatively unpolluted catchment and for this reason the greater part of the New Forest has been designated as an internationally important wetland, a Ramsar site.
- 5.1.8 Of the many ponds within the Forest the less acidic ponds support important populations of amphibians, including the great crested newt *Triturus cristatus*. The wetland habitats collectively form probably the most important single suite of habitats for dragonflies in Britain. Twenty-seven species breed in the New Forest. The temporary ponds that dry out in the summer provide ideal conditions for some specially adapted invertebrates and one such pond is the only known British locality for the tadpole shrimp *Triops cancriformis*.
- 5.1.9 The Forest supports populations of nine rare and twenty-five nationally scarce vascular plants. Nationally important breeding populations of birds as listed in Annex 1 of the EU Directive on

the Conservation of Wild Birds include nightjar *Caprimulgus europaeus*, woodlark *Lullula arborea*, Dartford warbler *Sylvia undata*, and kingfisher *Alcedo atthis*. The Forest also supports a wintering population of hen harrier *Circus cyaneus* which is also listed on Annex 1. Populations of all Britain's native reptiles are present in the New Forest including sand lizard *Lacerta angilis* and smooth snake *Coronella austriaca*, which both occur in suitable localities throughout the heathland. Otter *Lutra lutra* are found. Almost half of Britain's butterflies and moths have been recorded, and over a third of the beetle fauna.

5.2 Reasons for Designation

5.2.1 The New Forest qualifies as a SAC for both habitats and species. Firstly, the site contains the Habitats Directive Annex I habitats of:

- Nutrient-poor shallow waters with aquatic vegetation on sandy plains: Hatchet Pond has an example of an oligotrophic waterbody amidst wet and dry lowland heath developed over fluvial deposits. It contains shoreweed *Littorella uniflora* and isolated populations of northern species alongside rare southern species.
- Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels: In the New Forest large temporary ponds, shallow ephemeral pools and poached damp hollows in grassland, support a number of specialist species. These include the two nationally scarce species coral-necklace *Illecebrum verticillatum* and yellow centaury *Cicendia filiformis*. Temporary ponds occur throughout the Forest in depressions capable of holding water for part of the year. Most ponds are small (between 5-10 m across) and, although great in number, amount to less than 10 ha in total area.
- Wet heathland with cross-leaved heath: The New Forest contains the most extensive stands of lowland northern Atlantic wet heaths in southern England.
- Dry heaths: The New Forest represents European dry heaths in southern England and is the largest area of lowland heathland in the UK. It is particularly important for the diversity of its habitats and the range of rare and scarce species which it supports.
- Purple moor grass meadows: This vegetation occurs in situations of heavy grazing by ponies and cattle in areas known locally as 'lawns', often in a fine-scale mosaic with wet heaths and other mire and grassland communities. The New Forest meadows are unusual in the UK in terms of their species composition, management and landscape position
- Depressions on peat substrates: The New Forest, one of three sites selected in southern England, is considered to hold the largest area in England of depressions on peat substrates.
- Beech forests on acid soils: The New Forest is the largest area of mature, semi-natural beech *Fagus sylvatica* woodland in Britain.
- Beech forests on neutral to rich soils: The New Forest is the largest area of mature, semi-natural beech *Fagus sylvatica* woodland in Britain.
- Dry, oak-dominated woodland: The most extensive area of active wood-pasture with old oak *Quercus* spp. and beech *Fagus sylvatica* in north-west Europe and contains outstanding invertebrate and lichen populations.
- Bog woodland

- Alder woodland on floodplains: The New Forest contains many streams and some small rivers that are less affected by drainage and canalisation than those in any other comparable area in the lowlands of England.
- 5.2.2 The site also contains the Habitats Directive Annex I habitats ‘Very wet mires often identified by an unstable, quaking surface’ and ‘Calcium-rich, spring-water fed fens’, although these are not a primary reason for site selection.
- 5.2.3 The site contains the Habitats Directive Annex II species:
- Southern damselfly *Coenagrion mercuriale*: Several population centres and strong populations estimated to be in the hundreds or thousands of individuals, representing one of four major centres of population in the UK.
 - Stag beetle *Lucanus cervus*: its Hampshire/Sussex population centre, and a major stronghold for the species in the UK.
- 5.2.4 The site also contains the Habitats Directive Annex II species great-crested newt *Triturus cristatus*, although this is not a primary reason for site selection.
- 5.2.5 The New Forest is designated as a SPA for its breeding bird populations, specifically:
- 33.6% of the British population of Dartford warbler *Sylvia undata*
 - 10% of the British population of honey buzzard *Pernis apivorus*
 - 8.8% of the British population of nightjar *Caprimulgus europaeus*
 - 12.3% of the British population of woodlark *Lullula arborea* (1997 counts)
- 5.2.6 The SPA is also designated for its over-wintering population of:
- 2% of the British population of hen harrier *Circus cyaneus*.
- 5.2.7 The reasons for designation of the New Forest as a Ramsar site are illustrated in Table 3.

Table 3: The New Forest Ramsar site criteria

Ramsar criterion	Description of Criterion	New Forest Ramsar site
1	A wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.	Valley mires and wet heaths are found throughout the site and are of outstanding scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. This is the largest concentration of intact valley mires of their type in Britain.
2	A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities	The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plant are found on the site, as are at least 65 British Red Data Book species of invertebrate.
3	A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.	The mire habitats are of high ecological quality and diversity and have undisturbed transition zones. The invertebrate fauna of the site is important due to the concentration of rare and scarce wetland species. The whole site complex, with its examples of semi-natural habitats is essential to the genetic and ecological diversity of southern England.

5.3 Historical Trends and Current Pressures

- 5.3.1 Issues that have been highlighted in the Natura 2000 site description for the SAC as affecting habitat condition include drainage of wetland habitats for improved grazing and forestry, afforestation of heathland habitats with conifers and other non-native species, essential grazing by commoners' animals, and increased recreational pressures.
- 5.3.2 Recreational pressure and disturbance has been shown to adversely affect populations of woodlark elsewhere. However, the population in the New Forest is currently at a high level. Good habitat management is also relevant for maintaining populations of woodlark and Dartford warbler and this is achieved through the grazing, cutting and burning of gorse and heather to provide a diverse age structure and prevent succession to woodland. . Most of the valley mires in the Forest have been damaged in the past by drainage which has caused drying out of the peat layers. Work to restore valley mire systems is expected to influence wading bird populations in time. In addition, the Forestry Commission has carried out an exercise to ensure that the dog-walking public are aware of the sensitivities of the site during the nesting season³²,³³, and liaises with groups such as the New Forest Dog Owners Group.
- 5.3.3 The designated sites all fall within the National Park boundary and issues affecting them are addressed within the Park Management Plan considered within this report, as well as the existing SAC management plan³⁴.
- 5.3.4 The most recent condition assessment process carried out by Natural England (1999-2009)³⁵ has found that 32% of the New Forest is in favourable condition, with 65% recovering from unfavourable status. Data results from assessment of SSSIs, rather than internationally designated features, but nonetheless, provides a relevant understanding on the habitat status.
- 5.3.5 The key environmental conditions required to maintain site integrity include:
- Carefully balanced hydrological regime to maintain wet heath, mires and pools.
 - Acid soils.
 - Minimal air pollution (nitrogen deposition can cause compositional changes over time).
 - Unpolluted water.
 - Minimal nutrient inputs.
 - Low recreational pressure.
 - Appropriate grazing regime
 - Appropriate habitat management regime

³² [http://www.forestry.gov.uk/pdf/new-forest-dog-study.pdf/\\$FILE/new-forest-dog-study.pdf](http://www.forestry.gov.uk/pdf/new-forest-dog-study.pdf/$FILE/new-forest-dog-study.pdf)

³³ [http://www.forestry.gov.uk/pdf/new-forest-dog-walking.pdf/\\$FILE/new-forest-dog-walking.pdf](http://www.forestry.gov.uk/pdf/new-forest-dog-walking.pdf/$FILE/new-forest-dog-walking.pdf)

³⁴ <http://www.newforestlife.org.uk/life2/managementplan.htm>

³⁵ <http://www.sssi.naturalengland.org.uk/Special/sssi/>

5.4 Likely Significant Effects of the Park Management Plan

5.4.1 The objectives and supporting text laid out in the PMP apply to the SAC, SPA and Ramsar in their entirety, and therefore are all of direct relevance to the protected sites.

Recreational pressure

5.4.2 The expansion of housing and economic growth in South Hampshire and South East Dorset could lead to an estimated 8% increase (an additional 1.05 million visitor days) in people using the National Park for recreation by 2026³⁶. Recreational pressure could contribute to degradation of habitats within the SAC, by fragmentation, trampling, or through nutrient enrichment. While there is no certainty that these will occur, the Habitats Directive (and subsequent European Court of Justice judgments) make it clear that where a potential adverse effect exists, a precautionary approach must be taken (i.e. it must be concluded that it may result in an actual adverse effect unless there is reasonable scientific certainty that it will not). Ground nesting birds, for which the SPA and Ramsar site are designated, are particularly vulnerable to disturbance as a result of recreational pressure, as outlined in Chapter 3.

5.4.3 Objective 7 of the PMP seeks to enhance people's enjoyment and quality of experience within the National Park. The objective and supporting text discusses creation of more 'integrated' networks within the park, and safe access, citing for example, improved crossing points on major roads, which could encourage greater recreational pressure, there are a number of priority actions that offset the likelihood of this occurring:

- Agree and implement a Recreation Management Strategy for the National Park. This will involve consultation with Natural England.
- Agree the priorities for further research on recreational use and impacts. This will involve consultation with Natural England.
- One aim of the Objective is to "*ensure new recreational facilities are designed and located to avoid impacts on the special qualities of the area, including designated nature conservation sites and the most tranquil areas.*"

5.4.4 Natural England, in response to emerging LDFs in South Hampshire (such as New Forest District Council) has advised that development plans should:

- Recognise the sub-regional need for alternative open space
- Include provision for working with other local authorities and stakeholders in order to protect sites such as the New Forest, including measures to provide alternative recreational space, to manage access to sensitive areas, and to ensure developer input into avoidance and mitigation measures.

5.4.5 The PMP does this through Objective 2, which includes:

- the need to encourage "*green infrastructure plans, including areas for countryside recreation close to new development outside the National Park, and seeking improvements to open space within the park*";

³⁶ ³⁶ Sharp, J., Lowen, J. & Liley, D (2008). Changing patterns of visitor numbers within the New Forest National Park, with particular reference to the New Forest SPA. Footprint Ecology

- a commitment to work with key organisations to “*work towards a shared vision and agreed priorities for managing, enhancing or restoring the different landscapes and habitats of the National Park, involving local communities and land managers*”; and
 - a commitment to “*improve and sustain the quality of internationally and nationally designated habitats through appropriate land management, and by monitoring and managing recreational pressure to avoid any adverse impacts.*”
- 5.4.6 The background wording indicates that protection and enhancement of the semi-natural habitats of the New Forest will require close working with surrounding authorities and delivery of ‘practical mitigation measures’ where impacts on European sites may result.
- 5.4.7 Since there is no aspect of the Park Management Plan that could be deemed likely to have a significant adverse effect on the designated SAC, SPA or Ramsar site there is no mechanism for it to contribute to any ‘in combination’ effect, even when considered within the context of the development of over 100,000 new dwellings in Hampshire and Dorset over the lifetime of the South East and South West regional spatial strategies.
- 5.4.8 The PMP does not currently include reference to detailed visitor management policies; however, these will form aspects of the Recreation Management Strategy which is listed as a priority action. It will also be appropriate for this to be addressed through policy in the Core Strategy.
- 5.4.9 Chapter 5 of the PMP states that: “*A State of the Park report will be produced describing the overall condition of the National Park, with measurable indicators and targets relating to the objectives in the Management Plan. These will need to be developed with local organisations and practical means agreed for gathering baseline information and regularly monitoring the indicators. Over time the indicators will give a broad picture of changes in the condition of the special qualities of the Forest and show if the objectives and actions are being effective. The State of the Park report will be publicly available and reviewed every five years.*” It is indicated that the data obtained through monitoring will inform five-yearly reviews of the Management Plan, which should also take into account reviews of the Core Strategy and Recreation Management Plan in determining progress and ways forward.

Air Quality

- 5.4.10 Whilst increased visitor numbers will inevitably encourage travel by car to visit the New Forest (and this could in turn contribute to a deterioration in local air quality along the roadside), Objective 10 of the PMP contains measures that will help to alleviate car usage including:
- Working with key organisations in “*influencing regional and national transport policies in order to minimise impacts on the National Park and, where possible, achieve benefits for the area.*”
 - “*Supporting an integrated network of public and community transport, footpaths and cycling and riding routes designed to meet the needs of both residents and visitors.*”
- 5.4.11 In addition, Objective 7 is also focused on improving recreational access and usage issues within the Park.
- 5.4.12 The PMP is not the appropriate place for development control policies (which will be covered by the Core Strategy) but rather for overall objectives concerning the future management of the

National Park. As such it is considered that the objectives identified above sufficiently address this issue.

Summary

- 5.4.13 It can be concluded that the PMP is unlikely to lead to significant adverse effects on the New Forest SAC, SPA and Ramsar sites.
- 5.4.14 Note that effects as a result of Core Strategy development and recommendations for development control policies will be investigated as part of the HRA of the Core Strategy.

6 Solent European Sites

6.1 Introduction

6.1.1 There are several overlapping designations that cover the Solent. Although they have different interest features, the environmental conditions necessary to ensure their continuing favourable conservation status are similar as are the potential impacts of development in East Hampshire district. In order to reduce repetition, they are therefore considered collectively in this chapter.

6.1.2 These sites covered by this chapter are:

- Solent Maritime SAC; and
- Solent and Southampton SPA and Ramsar

Solent Maritime SAC

6.1.3 The Solent Maritime Special Area of Conservation (SAC) is a complex site encompassing a major estuarine system on the south coast of England. It lies 3.2km from the boundary of East Hampshire district.

6.1.4 The SAC includes sixteen Sites of Special Scientific Interest (SSSI) spread out along the Solent, including Langstone Harbour SSSI, Chichester Harbour SSSI and extensive areas of the inshore Solent along the north coast of the Isle of Wight, the Lymington area, the western shores of Southampton Water and the Hamble Estuary.

Solent and Southampton Water SPA and Ramsar

6.1.5 The site comprises a series of estuaries and harbours with extensive mud-flats and saltmarshes together with adjacent coastal habitats including saline lagoons, shingle beaches, reedbeds, damp woodland and grazing marsh. The mud-flats support beds of *Enteromorpha* spp. and *Zostera* spp. and have a rich invertebrate fauna that forms the food resource for the estuarine birds. In summer, the site is of importance for breeding seabirds, including gulls and four species of terns. In winter, the SPA holds a large and diverse assemblage of waterbirds, including geese, ducks and waders. Dark-bellied Brent Goose *Branta b. bernicla* also feed in surrounding areas of agricultural land outside the SPA.

6.2 Reasons for Designation

Solent Maritime SAC

6.2.1 Solent Maritime qualifies as a SAC for both habitats and species. Firstly, the site contains the following Habitats Directive Annex I habitats:

- Estuaries
- Cord-grass swards (*Spartina* swards *Spartinion maritimae*)
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Subtidal sandbanks (sandbanks which are slightly covered by seawater all the time)

- Intertidal mudflats and sandflats (mudflats and sandflats not covered by seawater at low tide)
- Lagoons (coastal lagoons)
- Annual vegetation of drift lines
- Coastal shingle vegetation outside the reach of waves (perennial vegetation of stony banks)
- Glasswort and other annuals colonising mud and sand (*Salicornia* and other annuals colonising mud and sand)
- Shifting dunes with marram (shifting dunes along the shoreline with *Ammophila arenaria* ‘white dunes’)

6.2.2 Secondly, the site contains the following Habitats Directive Annex II species:

- Desmoulin’s Whorl Snail *Vertigo moulinsiana*

Solent and Southampton Water SPA and Ramsar

6.2.3 Solent and Southampton Water qualifies as a SPA for its breeding and wintering bird species. As breeding species the site contains:

- Common Tern *Sterna hirundo*, 267 pairs representing at least 2.2% of the breeding population in Great Britain (5 year peak mean, 1993-1997)
- Little Tern *Sterna albifrons*, 49 pairs representing at least 2.0% 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)
- Sandwich Tern *Sterna sandvicensis*, 231 pairs representing at least 1.7% of the breeding population in Great Britain (5 year peak mean, 1993-1997)

Over winter:

- 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)

6.2.4 The area also qualifies as an SPA by supporting 53,948 individual waterfowl (5 year peak mean 1991/2 - 1995/6).

6.2.5 Solent and Southampton Water qualifies as a Ramsar as illustrated in Table 4.

Table 4: Solent and Southampton Water Ramsar site criteria

Ramsar criterion	Description of Criterion	Solent and Southampton Water
1	A wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.	The site is one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. It includes many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs.
2	A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.	The site supports an important assemblage of rare plants and invertebrates. At least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site.
5	A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds	Species with peak counts in winter: 51343 waterfowl (5 year peak mean 1998/99-2002/2003)
6	A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.	Qualifying Species/populations (as identified at designation): Species with peak counts in spring/autumn: Ringed plover , <i>Charadrius hiaticula</i> , Europe/Northwest Africa 397 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3) Species with peak counts in winter: Dark-bellied brent goose, <i>Branta bernicla bernicla</i> , 6456 individuals, representing an average of 3% of the population (5 year peak mean 1998/9-2002/3) Eurasian teal , <i>Anas crecca</i> , NW Europe 5514 individuals, representing an average of 1.3% of the population (5 year peak mean 1998/9-2002/3) Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe 1240 individuals, representing an average of 3.5% of the population (5 year peak mean 1998/9-2002/3)

6.3 Historic Trends and Current Pressures

Solent Maritime SAC

6.3.1 The Solent Maritime SAC has a number of physical constraints including existing and flood defence and coast protection works that, coupled with predictions of rising sea levels may lead to coastal squeeze of intertidal habitats. Developmental pressures including ports, marinas, jetties etc, often involve capital/ maintenance dredging to provide/ improve deep water access, and land-claim of coastal habitats. Such development along with ongoing port activities leads to an increased risk of accidental pollution from shipping, oil/chemical spills, heavy industrial activities, former waste disposal sites and waste-water discharge, while there is risk of introduction of non-native species e.g. from shipping activity.

- 6.3.2 Solent Maritime SAC suffers from nutrient enrichment³⁷, which causes excessive growth of green weed across the site. This green weed can form dense mats within the intertidal areas throughout sheltered areas of the site, inhibiting the natural functioning of these habitats. There is evidence of toxic contamination within certain areas of the site, including tri-butyl tin (TBT) at the head of Southampton Water and in the middle of the Solent, arising from historic use as an anti-fouling paint on boats. The Review of Consents process has identified an area of thermal pollution occurring over the shallow intertidal zone on the western shore of Southampton Water. Thermal plumes may affect the distribution of fish. There are areas of organic enrichment on the western shore of Southampton Water. This can make sediments anaerobic which can effect the distribution or composition of designated habitats.
- 6.3.3 Reductions in freshwater flows into the SAC may pose a risk to site's integrity. Estuaries are a very important feature of the site and implicitly require some freshwater input. It is also widely agreed that small freshwater flows may also be important to intertidal SAC habitats.
- 6.3.4 These issues have been and are being addressed through a number of mechanisms including the review of consents procedure under the Habitats Regulations, Biodiversity Action Plans, and other coastal strategies, management plans and management agreements. In 2000, a collaborative Solent European Marine Sites project was set up with the aim of developing a strategy for managing the marine and coastal resources of the Solent in a more integrated and sustainable way³⁸.
- 6.3.5 The key environmental conditions of the SAC are mainly:
- Sufficient space between the site and development to allow for managed retreat of intertidal habitats and avoid coastal squeeze.
 - No dredging or land-claim of coastal habitats.
 - Unpolluted water.
 - Absence of nutrient enrichment.
 - Absence of non-native species.
 - Maintenance of freshwater inputs.
 - Balance of saline and non-saline conditions.
 - Maintenance of grazing

Solent and Southampton Water SPA and Ramsar

- 6.3.6 The Solent and Southampton Water SPA/Ramsar has a number of physical constraints including existing and flood defence and coast protection works that, coupled with predictions of rising sea levels may lead to coastal squeeze of intertidal habitats. Developmental pressures including ports, marinas, jetties etc, often involve capital/ maintenance dredging to provide/improve deep water access, and land-claim of coastal habitats. Such development along with ongoing port activities leads to an increased risk of accidental pollution from shipping, oil/chemical spills, heavy industrial activities, former waste disposal sites and waste-water discharge, while there is risk of introduction of non-native species e.g. from shipping activity.

³⁷ http://www.environment-agency.gov.uk/static/documents/Business/solent_maritime_sac_1885867.pdf

³⁸ www.solentems.org.uk/

- 6.3.7 The SPA/Ramsar suffers from nutrient enrichment, which causes excessive growth of green weed. This green weed can form dense mats within the intertidal areas throughout sheltered areas of the site, inhibiting the natural functioning of these habitats. There is evidence of toxic contamination within certain areas of the site, including tri-butyl tin (TBT) at the head of Southampton Water and in the middle of the Solent, arising from historic use as an anti-fouling paint on boats. The Review of Consents process has identified an area of thermal pollution occurring over the shallow intertidal zone on the western shore of Southampton Water. Thermal plumes may affect the distribution of fish. There are areas of organic enrichment on the western shore of Southampton Water. This can make sediments anaerobic which can effect the distribution or composition of designated habitats.
- 6.3.8 Reductions in freshwater flows into the SAC may pose a risk to site's integrity. Recent research indicates that freshwater creeks flowing over intertidal areas are an important resource to many bird species. Birds use such freshwater zones at times of low tide for feeding, drinking, bathing and shelter. Licensed abstractions can have an adverse effect by reducing the amount of freshwater available.
- 6.3.9 These issues have been and are being addressed through a number of mechanisms including the review of consents procedure under the Habitats Regulations, Biodiversity Action Plans, and other coastal strategies, management plans and management agreements. In 2000, a collaborative Solent European Marine Sites project was set up with the aim of developing a strategy for managing the marine and coastal resources of the Solent in a more integrated and sustainable way.
- 6.3.10 The key environmental conditions required to maintain site integrity include:
- Sufficient space between the site and development to allow for managed retreat of intertidal habitats and avoid coastal squeeze.
 - No dredging or land-claim of coastal habitats.
 - Unpolluted water.
 - Absence of nutrient enrichment.
 - Absence of non-native species.
 - Low levels of recreational pressure both on shore and offshore can avoid disturbance effects during sensitive (over-wintering) periods.
 - Freshwater inputs are of value for providing a localised increase in prey biomass for certain bird species, specific microclimatic conditions and are used for preening and drinking.
 - Low amounts of silt loss.
 - Short grasslands surrounding the site are essential to maintaining interest features as they are now the key foraging resource.

6.4 Likely Significant Effects of the Park Management Plan

Recreational pressure

- 6.4.1 Recreational pressure on the interest features of Solent & Southampton Water SPA/Ramsar and Solent Maritime SAC arising from an increase in visitors to the National Park (primarily an ‘in combination’ impact within the context of increased populations across the South Hampshire sub-region) is a potential cause for concern.
- 6.4.2 The expansion of housing and economic growth in South Hampshire and South East Dorset could lead to an estimated 8% increase (an additional 1.05 million visitor days) in people using the National Park for recreation by 2026³⁹. Recreational access to the New Forest may lead to increased visitor numbers to the adjacent Solent sites, and, in particular, could contribute to disturbance of bird species (as outlined in Chapter 3), for which the SPA and Ramsar are designated.
- 6.4.3 Objective 7 of the PMP seeks to enhance people’s enjoyment and quality of experience within the National Park. The objective and supporting text discusses creation of more ‘integrated’ networks within the park, and safe access, citing for example, improved crossings points on major roads, which could encourage greater numbers of visitors, who may also utilise the Solent sites. There are a number of priority actions that offset the likelihood of this occurring, and which should consider impacts adjacent to the National Park:
- Agree and implement a Recreation Management Strategy for the National Park. This will involve consultation with Natural England.
 - Agree the priorities for further research on recreational use and impacts. This will involve consultation with Natural England.
 - Aims of the Objective include to “*ensure new recreational facilities are designed and located to avoid impacts on the special qualities of the area, including designated nature conservation sites and the most tranquil areas.*” Objective 7 also seeks to “*enhance people’s enjoyment and the quality of their experience of the National Park while safeguarding the special qualities of the area*” and includes ‘*improving understanding of the current and future likely recreational demand, and the impacts of recreation on the National Park’s special qualities*’.
- 6.4.4 Objective 2 includes:
- the need to encourage “*green infrastructure plans, including areas for countryside recreation close to new development outside the National Park, and seeking improvements to open space within the park*”;
 - a commitment to work with key organisations to “*work towards a shared vision and agreed priorities for managing, enhancing or restoring the different landscapes and habitats of the National Park, involving local communities and land managers*”; and
 - a commitment to “*improve and sustain the quality of internationally and nationally designated habitats through appropriate land management, and by monitoring and managing recreational pressure to avoid any adverse impacts.*”

³⁹ ³⁹ Sharp, J., Lowen, J. & Liley, D (2008). Changing patterns of visitor numbers within the New Forest National Park, with particular reference to the New Forest SPA. Footprint Ecology

- 6.4.5 The background wording indicates that protection and enhancement of the semi-natural habitats of the New Forest will require close working with surrounding authorities and delivery of ‘practical mitigation measures’ where impacts on European sites may result.
- 6.4.6 Natural England, in response to emerging LDFs in South Hampshire (such as New Forest District Council) has advised that development plans should:
- Recognise the sub-regional need for alternative open space
 - Include provision for working with other local authorities and stakeholders in order to protect sites such as the New Forest, including measures to provide alternative recreational space, to manage access to sensitive areas, and to ensure developer input into avoidance and mitigation measures.
- 6.4.7 It should be noted however, that this advice is given in relation to Core Strategies which contain development promotion and control policies. The PMP sets aspirational objectives for the future direction of the National Park (aside from the Authority’s local planning function) and as such Objectives 7 and 2 do clearly indicate the importance of recreational impacts and their management in the future direction of the Park. As such it is concluded that significant adverse effects are unlikely as a result of the Park Management Plan. The possible impacts of Authority’s policies as a local planning authority (including recreational impacts) will be covered separately through the HRA of the Core Strategy.
- 6.4.8 It is anticipated that the National Park Authority will continue to work with the Solent Forum in response to concerns over the impact of recreational pressure on features of the Solent SPA, SAC and Ramsar sites on initiatives supported by authorities in the Partnership for Urban South Hampshire (PUSH). The Phase 1 report from the Solent Forum project which is currently investigating recreational pressure issues and their mitigation⁴⁰ reviews the policies in the South East Plan for new housing within the local authority areas bordering the Solent SPA, SAC and Ramsar Sites and changes to the Plan that have been proposed by the Secretary of State to protect and enhance biodiversity. Phase 1 of this project has:
- Collated existing data on the distribution of housing and human activities around the Solent;
 - Assessed stakeholder opinion of the importance of recreational disturbance on birds through a series of workshops and interviews;
 - Collated data on bird distribution and abundance around the Solent; and
 - Outlined the range of mitigation measures that could potentially minimise the impacts of increased recreational disturbance caused by increased housing in the Solent area.
- 6.4.9 Two other phases of the project are planned and are currently being further developed with Phase 1 providing the background information for these future phases. Phase 2 will assess the current impact of current visitor numbers and activities on the survival rates of shorebirds throughout the Solent. Phase 3 will predict the impact of future changes in housing density and assess associated mitigation measures on the number of people visiting the Solent, and the associated impact on the survival rates of shorebirds. The timescale for phases II and III is uncertain, as funding has not yet been secured.

⁴⁰ Stillman, R. A., Cox, J., Liley, D., Ravenscroft, N., Sharp, J. & Wells, M. (2009) Solent disturbance and mitigation project: Phase I report. Report to the Solent Forum

- 6.4.10 Given the objectives expressed within the PMP and the other activities in which the National Park Authority are participating to explore and mitigate recreational impacts on the Solent, it can be concluded that significant effects as a result of the PMP and its objectives are unlikely.
- 6.4.11 Clearly, effectiveness of these objectives needs to be monitored. Chapter 5 of the PMP states that: *“A State of the Park report will be produced describing the overall condition of the National Park, with measurable indicators and targets relating to the objectives in the Management Plan. These will need to be developed with local organisations and practical means agreed for gathering baseline information and regularly monitoring the indicators. Over time the indicators will give a broad picture of changes in the condition of the special qualities of the Forest and show if the objectives and actions are being effective. The State of the Park report will be publicly available and reviewed every five years.”* It is indicated that the data obtained through monitoring will inform five-yearly reviews of the Management Plan, which should also take into account reviews of the Core Strategy, Recreation Management Plan, and reviews by other authorities and stakeholders in determining progress and ways forward.

Coastal Squeeze

- 6.4.12 The Solent Maritime SAC has a number of physical constraints including existing and flood defence and coast protection works that, coupled with predictions of rising sea levels may lead to coastal squeeze of intertidal habitats. It has already been established that there is no mechanism by which the PMP can lead to adverse effects on the Solent European sites through coastal squeeze (to which the Solent and Isle of Wight Lagoons SAC could also be vulnerable). However, there is an objective that covers coastal defences.
- 6.4.13 Within the PMP, Objective 4 aims to *“ensure critical parts of the coastline (as identified in the Shoreline Management Plan) are protected from sea-level rise through environmentally acceptable coastal defences, while allowing the natural realignment of the coast where appropriate and seeking opportunities for the creation of new coastal habitats particularly where this helps to maintain the nature conservation value of designated coastal sites.”*
- 6.4.14 As such, this objective, while allowing some coastal defence, would not result in adverse effects on European sites.
- 6.4.15 A priority action of Objective 4 will be to *“Develop and promote a climate change adaptation strategy for the National Park, involving local organisations and communities.”*

Air Quality

- 6.4.16 Whilst increased visitor numbers to the New Forest will increase the likelihood of travel by car to visit adjacent Solent sites, Objective 10 of the PMP contains measures that will help to alleviate car usage including:
- Working with key organisations in *“influencing regional and national transport policies in order to minimise impacts on the National Park and, where possible, achieve benefits for the area.”*
 - *“Supporting an integrated network of public and community transport, footpaths and cycling and riding routes designed to meet the needs of both residents and visitors.”*

Summary

- 6.4.17 It can be concluded that there is no likely significant impact of the plan on the Solent European sites.
- 6.4.18 Note that effects as a result of Core Strategy development and recommendations for development control policies will be investigated as part of the HRA of the Core Strategy.

7 Conclusions

7.1 Conclusions

7.1.1 It is important to understand the nature of the Park Management Plan sets out the vision and a series of objectives for the long-term management of the area involving both the National Park Authority and a wide range of partners. It aims to provide a framework for delivering the 2 national park purposes and the duty. We have concluded that there is no likely significant impact of the plan on the following European designated sites:

- Mottisfont Bats SAC;
- New Forest SAC, SPA and Ramsar sites;
- Solent Maritime SAC; and
- Solent and Southampton Water SPA and Ramsar sites.

7.1.2 Note that effects as a result of the Core Strategy objectives will be investigated as part of the HRA of the Core Strategy.

Appendix 1: Summary of Park Management Plan Objectives

Objective number	Objective headline	Summary of approach to achievement of objective
01	Conserve and enhance the wealth of individual characteristics that contribute to local distinctiveness of the villages and landscapes of the New Forest	<p>The approach will be to work with the key organisations to:</p> <ul style="list-style-type: none"> • Identify and raise awareness about the full range of characteristics that contribute to local distinctiveness in the National Park. • Support improvements to the character of selected settlements, working closely with local communities. • Protect and encourage the sensitive management of locally important sites and features, • Ensure that the design of new development takes into account local distinctiveness in the National Park.
02	Protect and enhance the large-scale cultural landscapes and semi-natural habitats of the New Forest	<p>The approach will be to work with key organisations to:</p> <ul style="list-style-type: none"> • Work towards a shared vision and agreed priorities for managing, enhancing or restoring the different landscapes and habitats of the National Park, involving local communities and land managers. • Improve and sustain the quality of internationally and nationally designated habitats through appropriate land management, and by monitoring and managing recreational pressure to avoid any adverse impacts. • Encourage integrated land management on the enclosed lands which enhances the landscape character, habitats and archaeological features of the area. • Ensure development proposals, both within and close to the National Park, take the important landscapes, habitats, wildlife and the visual setting of the Park fully into account. • support the production of green infrastructure plans, including areas for countryside recreation close to new development outside the National Park, and seeking improvements to open space within the Park

Objective number	Objective headline	Summary of approach to achievement of objective
03	Encourage land management that sustains the special qualities of the National Park	<p>The approach will be to work with key organisations to:</p> <ul style="list-style-type: none"> • Support farming, commoning and forestry businesses that contribute to the local economy and help to maintain the landscapes of the National Park • Develop support schemes for commoners and farmers tailored to the needs of the New Forest • Take forward the priority recommendations of the New Forest Commoning Review , including protecting the stock of land available for back-up grazing and supporting housing for commoners • Support appropriate diversification schemes that help to sustain the existing farming or commoning business • Provide co-ordinated land management advice relevant to the New Forest • Encourage long-term plans to guide woodland management on privately owned land, including the restoration of ancient or indigenous woodland.
04	Plan for the likely impacts of climate change on the special qualities of the New Forest and reduce the overall environmental footprint of the National Park	<p>The approach will be to work with key organisations to:</p> <ul style="list-style-type: none"> • Improve dialogue and understanding about climate change impacts, including the monitoring of impacts at a regional and local level • Conserve and where necessary restore an extensive network of natural habitats both within and across the National Park boundary, to improve resilience and reduce fragmentation • Ensure critical parts of the coastline (as identified in the Shoreline Management Plan) are protected from sea-level rise through environmentally acceptable coastal defences, while allowing the natural realignment of the coast and seeking the creation of new habitats where appropriate, particularly where this helps to maintain the nature conservation value of designated coastal sites • Raise public awareness about the environmental footprint of the area and encourage a change towards more sustainable lifestyles by organisations, communities, businesses and individuals. • Support local or community-based initiatives for improving energy efficiency, reducing waste, recycling, composting, food production, water conservation or producing renewable energy.

Objective number	Objective headline	Summary of approach to achievement of objective
05	Maintain and enhance the tranquillity of the National Park	<p>The approach will be to work with key organisations to:</p> <ul style="list-style-type: none"> • Conserve the most tranquil and remote areas of the National Park and reduce fragmentation of these areas where possible. • Reduce the impacts of noise, visual intrusion and inappropriate activity generally • Improve the quality of the ‘dark skies’ of the National Park.
06	Achieve a shared understanding and recognition of the Special Qualities of the National Park by local people, visitors and organisations	<ul style="list-style-type: none"> • Raise awareness about the special qualities of the New Forest in a consistent and co-ordinated way • Promote Caring for the Forest behavioural messages, linked to the special qualities, incorporating them into a wide range of publications and other media. • Develop sensitive and innovative forms of interpretation which add to the appreciation and enjoyment of the National Park, while minimising the need for additional signage • Support education activities that are linked to the special qualities of the Forest for both academic purposes and enjoyment. • Develop a co-ordinated and accessible system for holding technical information about the National Park, for use by land managers, organisations and local communities.
07	Enhance people’s enjoyment and the quality of their experience of the National Park while safeguarding the special qualities of the area	<p>The approach will be to work with the key organisations to:</p> <ul style="list-style-type: none"> • Provide opportunities for safe access, including a more joined-up network of core routes into and within the National Park • Enabling the involvement of under-represented groups who feel the National Park provides few opportunities for them, or who feel excluded due to cost, lack of transport or other barriers. • Encourage a high standard of services and well-designed and maintained facilities for visitors within the National Park. • Improve understanding of the current and likely future recreational demand, and the impacts of

Objective number	Objective headline	Summary of approach to achievement of objective
		<p>recreation on the National Park's special qualities.</p> <ul style="list-style-type: none"> • Raise awareness about the sensitive environment, and the working nature of the New Forest, through direct contact with the public and working closely with user groups. • Ensure new recreational facilities are designed and located to avoid impacts on the special qualities of the area, including the designated nature conservation sites and the most tranquil areas. • Maintain a clean and litter-free National Park
08	Strengthen the well-being, identity and sustainability of rural communities and the pride of local people in their area	<p>The approach will be to work with the key organisations to:</p> <ul style="list-style-type: none"> • Maintain and improve the range of community facilities and services that provide for the needs of local people and contribute to the vitality of village life • Provide more affordable housing for local people with housing needs and address the particular housing requirements of commoners • Support communities in developing proposals for their area and undertaking practical projects to improve the quality of village life and the local environment • Encourage local communities to record, celebrate and promote interest in their local culture, traditions and heritage
09	Develop a diverse and sustainable economy that contributes to the well-being of local communities	<p>The approach will be to work with the key organisations to:</p> <ul style="list-style-type: none"> • Provide the conditions to encourage a wide variety of business opportunities and employment for local people throughout the National Park, where these do not compromise the special qualities of area. • Provide particular encouragement to businesses that help to supply services for rural communities, promote local distinctiveness, maintain the land-based economy or contribute local produce or products. • Support businesses in developing ways of reducing their environmental impact using sustainable technologies and practices.

Objective number	Objective headline	Summary of approach to achievement of objective
		<ul style="list-style-type: none"> • Support training and co-ordinated business advice relevant to the area. • Strengthen the New Forest’s role at the forefront of sustainable tourism. • Develop stronger links with the business community and partnerships.
10	Reduce the impacts of traffic on the special qualities of the National Park and provide a range of sustainable transport alternatives within the Park	<p>The approach will be to work with the key organisations to:</p> <ul style="list-style-type: none"> • Influence regional and national transport policies in order to minimise impacts on the National Park and, where possible, achieve benefits for the area. • Help to reduce the number of animal accidents on roads within the National Park. • Develop a distinctive and different experience for those travelling within the National Park which clearly indicates its special and protected status. • Promote measures to reduce the impacts of road traffic on the quality of life of local communities and the environmental quality of the National Park. • Support an integrated network of public and community transport, footpaths and cycling and riding routes designed to meet the needs of both residents and visitors.

THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF SCOTT WILSON'S APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. SCOTT WILSON ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.

© SCOTT WILSON LTD 2010

NOTES

- Ramsar Sites
- 1 - New Forest
- 2 - Solent & Southampton Water
- Special Areas of Conservation
- 1 - Mottisfont Bats
- 2 - New Forest
- 3 - Solent Maritime
- Special Protection Areas
- 1 - New Forest
- 2 - Solent & Southampton Water
- New Forest National Park Boundary
- Settlements
- Mainline Railway
- Motorway
- Primary / A Road

Copyright © Natural England 2009, reproduced with the permission of Natural England © AND Data Solutions, B.V. 2010

Revision Details	By	Date	Suffix

Drawing Status: **FINAL**

Job Title: **NEW FOREST NATIONAL PARK HRA**

Drawing Title: **DESIGNATED SITES**

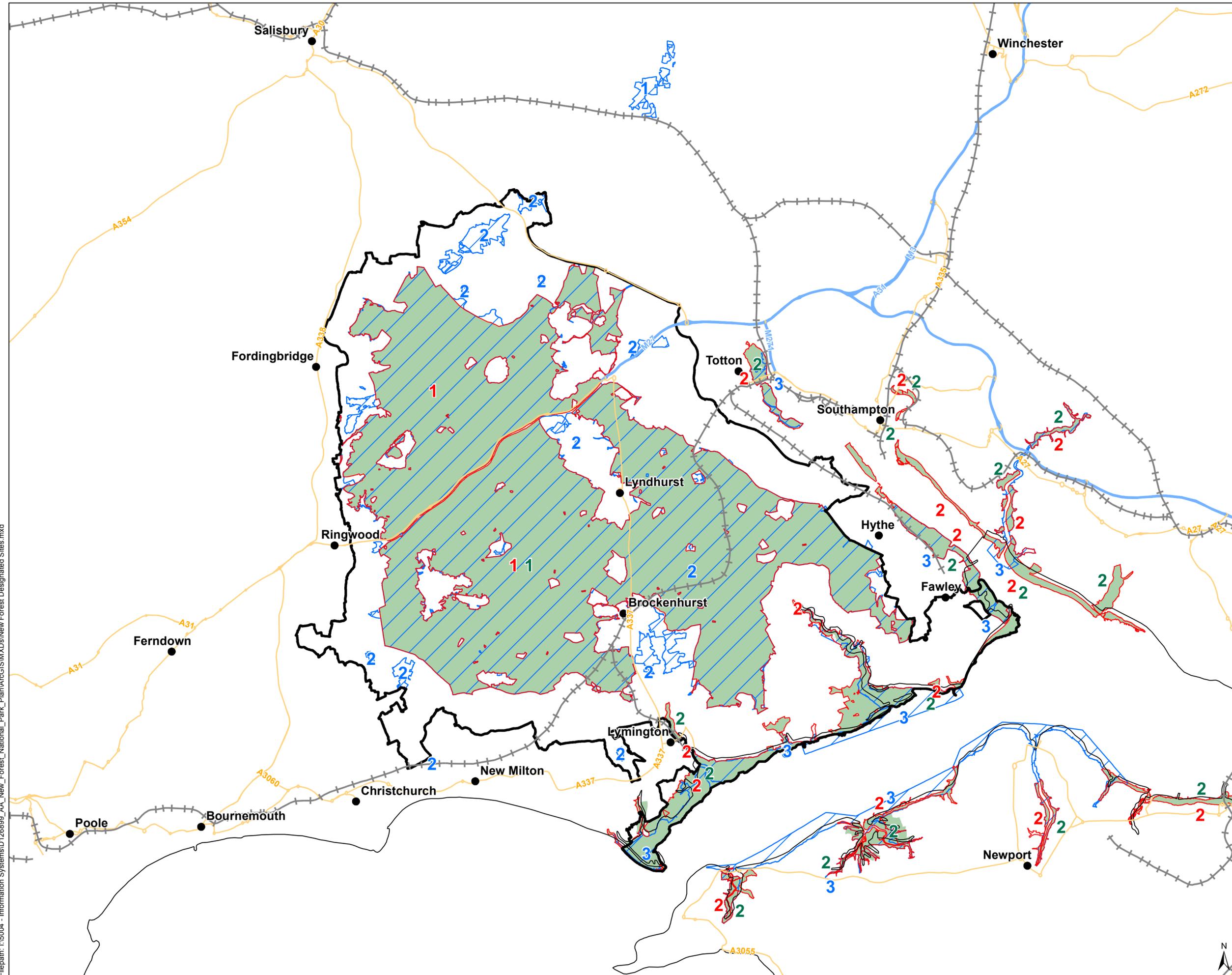
Scale at A2: 1:120,000

Drawn: JM	Approved: GD		
Stage 1 check	Stage 2 check	Originated	Date

Scott Wilson
 Scott House
 Alençon Link, Basingstoke
 Hampshire, RG21 7PP
 Telephone (01256) 310200
 Fax (01256) 310201
 www.scottwilson.com



Drawing Number: **FIGURE 3**



Date: 26th January 2010
 Filepath: I:\5004 - Information Systems\126899_AA_New_Forest_National_Park_Plan\ArcGIS\MXDs\New Forest Designated Sites.mxd

