

**THAMES BASIN HEATHS SPA  
TECHNICAL BACKGROUND DOCUMENT  
TO THE CORE STRATEGY DPD**

**June 2007**



**INCLUDING AN APPROPRIATE ASSESSMENT OF  
THE CORE STRATEGY DPD AND AVOIDANCE AND  
MITIGATION STRATEGY**





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## SECTION 1: INTRODUCTION

### 1. Background

- 1.1 The Conservation (Natural Habitats & c.) Regulations 1994, referred to as the “Habitats Regulations” implement in Great Britain the requirements of the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, referred to as the “Habitats Directive” (Council Directive 92/43/EEC) and protect areas classified under EC Council Directive 79/409/EEC on the conservation of wild birds, referred to as the “Birds Directive”. The Regulations aim to protect a network of sites in the UK that have rare or important habitats and species in order to safeguard biodiversity.
- 1.2 Under the EC Birds Directive, Member States are required to take special measures to conserve the habitats of certain rare species of birds (listed in Annex I of the Birds Directive) and regularly occurring migratory birds. In particular each Member State was required to classify the most suitable areas of such habitats as Special Protection Areas (SPAs). This is designed to protect wild birds, and to provide sufficient diversity of habitats for all species so as to maintain populations at an ecologically sound level. All Bird Directive SPAs are part of the Natura 2000<sup>1</sup> network under Article 3(1) of the Habitats Directive.
- 1.3 Under Article 6(3) of the Habitats Directive, Competent Authorities have a duty to ensure that all the activities they regulate have no adverse effect on the integrity of any of the Natura 2000 sites. Therefore, the Competent Authority must assess the possible effects of the various proposals on any Natura 2000 sites. This includes screening for potential impacts on European sites. If there is a probability or a risk that there will be significant effects on site integrity alone or in-combination with all other relevant plans or projects (having regard to the site’s conservation objectives) then the plan or project must be subject to an Appropriate Assessment (AA) of its implications on the site. In the light of the conclusions of the assessment the competent authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and where the plan cannot pass further stringent tests described in Article 6(4). This process is clarified in Figure 1 (page 7) of Circular 06/2005 ‘Biodiversity and Geological Conservation’ reproduced in Appendix 1 (page 85).
- 1.4 The decision-taker must consider the likely and reasonably foreseeable effects to ascertain that the proposal **will not have an adverse effect on the integrity of the site** before it may grant permission.
- 1.5 As described above, screening and, if necessary, AA should be undertaken by the Competent Authority; in the case of the Core Strategy DPD this is Bracknell Forest Borough Council. However, the process also requires ecological expertise in order to make judgements about the implications for sites’ integrity. It also requires close working with Natural England<sup>2</sup> in order to obtain the necessary information, agree the

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<sup>1</sup> Natura 2000 sites are a ecological network of sites (SPAs and SACs) which were established under the Habitats Directive to provide a strong protection for Europe’s wildlife areas.

<sup>2</sup> Reference to Natural England throughout this document recognises that early consultation on this document was carried out with Natural England’s predecessor, English Nature.



process, outcomes and mitigation proposals, and to meet the requirements of the Habitats Regulations.

## 2. Plan level assessment

- 2.1 Prior to October 2005, the UK's approach to determining any significant effects on the integrity of Natura 2000 sites was not extended to an assessment of plans. However, an ECJ Judgement<sup>3</sup> on 20 October 2005 ruled that this approach does not meet the requirements of Article 6 of the Habitats Directive. This requires the UK's approach to be modified to ensure that the impacts of land use<sup>4</sup> plans on Natura 2000 sites are properly assessed, and decisions taken in accordance with Article 6(4).
- 2.2 The necessary amendments are currently being made to the Conservation (Habitats & c.) Regulations, 1994, and are set out in The Draft Conservation (Natural Habitats, &c.) (Amendment) (England and Wales) Regulations 2006. The Communities and Local Government (former Office of the Deputy Prime Minister) have advised<sup>5</sup> that the amended regulations will not have a transitional provision to cover land-use plans in the course of preparation when they come into force. As a result Appropriate Assessment will be required for all land-use plans likely to have a significant effect on a European site from this date. However, guidance produced by DCLG (August 2006) states that *"RPBs and LPAs are not expected to recommence AA when they have already started work on AA prior to the publication of this guide. In those instances where this guide puts forward a different approach to the AA process from that laid down in existing guidance, it is acceptable for RPBs and LPAs to have followed the latter."*
- 2.3 PPS 9: Biodiversity and Geological Conservation and the accompanying Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System both contain guidance for Appropriate Assessment which predates the ECJ judgement. Therefore, pending specific guidance from national government on how to carry out plan level Appropriate Assessment, more weight has been given to the EC publication "Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC" (November 2001).

## 3. Relevance to Bracknell Forest Borough Council

- 3.1 The current Bracknell Forest Borough Local Plan is being replaced by the Bracknell Forest Borough Local Development Framework; a collection of documents (Local Development Documents) containing policies and proposals to guide future development within the Borough. The Local Development Scheme (LDS) is a three year project plan, prepared by the Borough Council, which outlines every Local Development Document that the Council intends to produce over the next three years, along with timetables for their preparation.

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<sup>3</sup> Judgement C-6/04 of the European Court of Justice, 20 October 2005.

<sup>4</sup> Land-use plans are synonymous with Development plans and refer to Regional Spatial Strategies, transitional plans and Local Development Documents (both Development Plan Documents and Supplementary Planning documents).

<sup>5</sup> In a letter dated 9 March 2006 to Local Planning Authorities from Lisette Simcock, ODPM

- 3.2 As explained in the previous section the Local Development Documents are now subject to the requirements of the Habitats Regulation. The LDS currently states that in the first round of plans the following DPD will be taken forward and therefore will be subject to assessment:

**The Core Strategy DPD** – This will set the long-term vision, objectives and strategy for the spatial development of Bracknell Forest and provide a framework for promoting and controlling development. The Core Strategy DPD will provide a strategic direction to the LDF preparation process and will be an umbrella document informing the preparation of the other Local Development Documents.

- 3.3 The Preferred Approach for the Core Strategy DPD was produced for consultation in February 2006. Subsequently, the Core Strategy document was refined and amended into the Submission document, which was submitted to government in November 2006 and available for public participation for six weeks from this date.

#### **4 Integration with the Sustainability Appraisal and Strategic Environmental Assessment (SA/SEA) process**

- 4.1 Plans and programmes that have been determined to require Appropriate Assessment pursuant to the Habitats Directive, are also subject to an assessment procedure under the SEA Directive (Article 3(2)(b)). Therefore a combined process can be carried out provided it fulfils the procedural steps required by the SEA Directive and the substantive test regarding the effect on protected sites required by the Habitats Directive.
- 4.2 However, as the SA/SEA for the Core Strategy Development Plan Documents was already advanced, the Screening stage and Appropriate Assessment have remained separate to the SA/SEA process. For subsequent DPDs or SPDs a screening exercise will be carried out in line with the approach in Regulation 9 of the SEA regulations, which requires key stakeholders to be consulted. If no significant effects are identified the Screening Statement will be included in the SA Report.

#### **5 Methodology**

- 5.1 The Appropriate Assessment process is made up of four key stages as set out below:
- Stage 1) Screening exercise (Regulation 48(1)).
  - Stage 2) Appropriate Assessment (Regulation 48(1)).
  - Stage 3) Mitigation and alternatives (Regulation 48(6)).
  - Stage 4) Imperative reasons of overriding public interest (Regulation 49).
- 5.2 This report sets out the findings of stages 1) to 3) above and enables the competent authority to conclude that components of the Core Strategy DPD would not adversely affect the integrity of any Natura 2000 sites, with regard to the implications of the plan on a site's 'qualifying features'. This report goes further, in as much as it includes an SPA Avoidance and Mitigation Strategy, which provides evidence of how any measures identified during stage 3) above will be secured and implemented.
- 5.3 This Appropriate Assessment has used information from Natural England's Delivery Plan (26 May 2006) and draft Supplementary Planning Document (28 April 2006), whilst modifying certain elements to give the document a more local perspective.



- 5.4 The methodology and content of this report has been subject to 4 stages of consultation with Natural England, The Royal Society for the Protection of Birds (RSPB) and the Wildlife Trust, in addition to a wider public consultation. The report has also been scrutinised by an independent ecologist to verify the approach taken and its effectiveness.

## STAGE 1: SCREENING EXERCISE

### 6. Screening Exercise

**6.1** This first stage examines the likely effects of a project or plan, either alone or in-combination with other plans or projects, upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant. This screening comprises of 6 steps.

- Step 1.** Determining whether the plan is directly connected with or necessary for the management of the site.
- Step 2.** Describing the plan or project and any others that in combination have the potential to significantly affect the Natura 2000 site(s).
- Step 3.** Identifying the potential effects on the site(s).
- Step 4.** Assessing the significance of these effects.
- Step 5.** Formulating a screening opinion
- Step 6.** Consultation

**6.2** A screening exercise was carried out to establish the impacts of the Core Strategy DPD on Natura 2000 sites within the Borough and to establish whether there is a likelihood of significant effect arising from the DPD upon other Natura 2000 sites outside the Borough. This was based upon best information available to Bracknell Forest Borough Council at the current time.

**6.3** Regulation 48(1) of the Habitats Regulations 1994 requires this screening opinion, which makes an initial determination of likely significance, to be submitted to the appropriate nature conservation body and have regard to any representations.

**6.4** Therefore, relevant stakeholders were consulted on the screening opinion to ensure all elements of the plan are considered which, either alone or in-combination, have the potential for a significant effect on relevant sites. This helped the Council identify potential effects, likely pathways for those effects and key indicators to be used. The screening therefore looked at the significant effects of the plan objectives and of each individual policy.

The following responses were received from the consultees.

**Table 1. Screening opinion consultation responses**

Organisation	Contact	Date of response	Response
Natural England <sup>6</sup>	Samantha King	9 May 2006	Concur with the screening opinion that impacts may arise from both DPDs for the SPA only.
Royal Society for the Protection of Birds	Colin Wilkinson	28 April 2006	Broadly support general approach adopted by the Council, subject to minor changes. Amend 'significant impact' to 'significant effect'.

<sup>6</sup> The organisation issuing the response was English Nature.

Organisation	Contact	Date of response	Response
Countryside Agency	Julie Delcroix		No response
Berks Bucks & Oxon Wildlife Trust	Ellie Seaborne	27 April 2006	In general agree with the conclusion of the screening opinion, with the exception of a couple of points. Further plans should be included in the in-combination assessment. The impacts of fragmentation and hydrology should be amended.

Following consultation, the relevant changes were made to the Screening Statement and this amended version can be found in Appendix 2 (page 86).

**The screening opinion concluded that, as the Preferred Options DPDs were drafted, they were likely to have a significant effect on the Thames Basin Heaths Special Protection Area. No significant effect was identified on the integrity of any other Natura 2000 sites.**

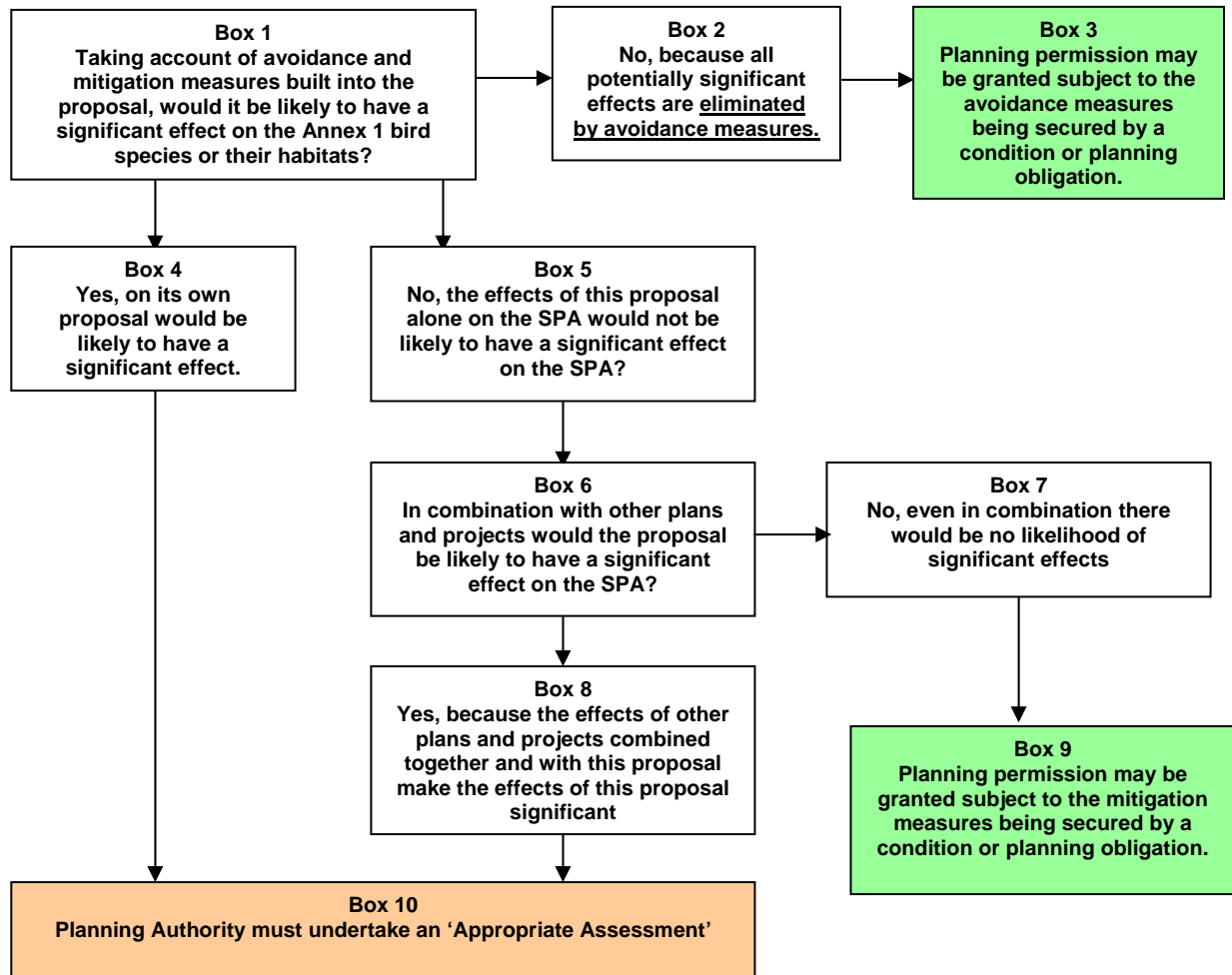
## 6.5 Next stages

As a result of the above screening, the policies likely to have a significant effect within the submission document for the Core Strategy DPD have been subject to an Appropriate Assessment. This is supported by an SPA Technical Background Paper to the Core Strategy, which identifies the avoidance and mitigation measures necessary to remove any significant adverse effects on the Thames Basin Heaths SPA. This is in accordance with Regulation 48(6) which requires the authority to have regard to the manner in which the plan will be carried out or to any conditions or restrictions proposed.

## 6.6 Natural England has provided advice on the early stages of Appropriate Assessment<sup>7</sup> and Figure 1 is reproduced from their Template Supplementary Planning Document.

<sup>7</sup> Paragraph 3.12, Template Thames Basin Heaths Supplementary Planning Document, English Nature, April 2006.

**Figure 1. Detail on the early stages of assessment under the Habitats Regulations 1994 (Natural England, 2006)**



**6.7** The initial stages of Appropriate Assessment entailed a detailed consideration of the specific impact of each remaining policy on the integrity of the Thames Basin Heaths SPA; at this stage areas of concern will be noted.

**6.8** The assessment process should then consider ways in which the Core Strategy policies can be modified, or other measures or restrictions could be put in place, to avoid potential effects on the site's integrity.

## STAGE 2: APPROPRIATE ASSESSMENT

### 7. Appropriate Assessment

7.1 During this stage, the effect of the plan (either alone or in-combination with other plans or projects) on the integrity of the Natura 2000 site is considered with respect to the conservation objectives of the site and to its structure and function. The integrity of a site involves its ecological functions and the decision as to whether it is adversely affected should focus on, and be limited to, the site's conservation objectives (European Commission, 2000, para. 4.6(3)). This process consists of 6 steps:

**Step 1.** Collect adequate information to complete the assessment – to include a description of the plan and the baseline conditions of the Natura 2000 site.

**Step 2.** Predict the likely effects of the plan.

**Step 3.** Assess whether the predicted effects will have adverse effects on the integrity of the site, as defined by the conservation objectives.

**Step 4.** Propose and assess impact avoidance measures to cancel or minimise the potential adverse effects, including a timescale and mechanisms through which the measures will be secured, implemented and monitored.

**Step 5.** Consult the relevant nature conservation bodies and the public.

7.2 The remainder of this document focuses on the effects of the Core Strategy DPD on the integrity of the Thames Basin Heaths SPA. The assessment does not consider the plan's effects on other Natura 2000 sites as they were 'screened out' during the Screening Stage (detailed on page 9).

## STEP 1: COLLECTION OF ADEQUATE INFORMATION TO IDENTIFY ADVERSE EFFECTS

### 8 Plan characteristics which may affect the site

8.1 The Core Strategy DPD will set the overarching local planning framework for the Borough up to 2026. It will set out a broad approach against which decisions on future development relating to where we live, work, spend our leisure time and how we travel, will be considered. The principles and policies in the Core Strategy will form the basis for more detailed policies and proposals to be prepared in other documents.

8.2 During the screening stage the following policies were identified as potentially having an adverse effect on the SPA, as they were currently drafted and in the absence of avoidance and mitigation measures:

**Draft CS2 Location Principles Policy** (previously SG2) – The use of PDL within the urban areas predominantly requires the use of land within 5km of the SPA, therefore without avoidance or mitigation measures this has the potential to have an adverse impact.

**Draft Policies CS4 Land at Amen Corner and CS5 Land north of Whitegrove and Quelm Park** (previously policy SG3) – These urban extensions include housing

provision and fall within 5km of the SPA, therefore without mitigation they have the potential to have an adverse effect.

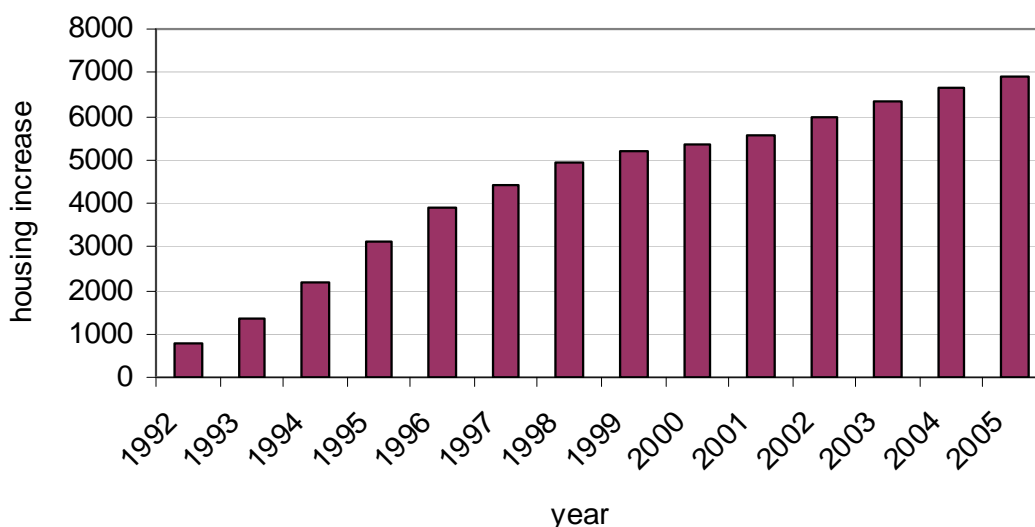
**Draft policy CS15 Overall Housing Provision** (previously policies SL1 and SL2) – New residential developments within 5km could increase the impact of recreation, including fragmentation, disturbance and vandalism.

## 9 In-combination effects arising from plans or projects

- 9.1 The Appropriate Assessment must be considered both alone and in-combination with other plans or projects because a series of individually modest impacts may in combination result in a significant impact. Article 6(3) of the Habitats Directive addresses this by requiring Appropriate Assessment to take into account the combination of effects from other plans or projects. The intention of this combination provision is to take account of cumulative impacts, and these will often only occur over time.
- 9.2 Guidance from the EC (European Communities, 2000) is helpful in clarifying the types of plans or projects to be considered during this in combination assessment. Already completed plans and projects are excluded from the assessment, however some account must be taken of these plans and projects if they have continuing effects on the site and point to a pattern of progressive loss of site integrity.
- 9.3 In accordance with this guidance, completed development proposals and development plans will only be included if their impacts on the site lead to a continuing loss of integrity.
- 9.4 The screening exercise identified that the relevant plans with the potential to affect the SPA are those which provide residential dwellings, which in turn increase the population surrounding the SPA, and increase recreation on the heathland. Therefore, the proposed plans or projects that are considered likely to affect the SPA are:
- Existing planning permissions granted within the visitor catchment of the SPA.
  - Future housing allocations provided in the South East Plan, which are likely to be built within the visitor catchment of the SPA.
- 9.5 Over the past five years there has been a decline in the rate of development in the Borough, which is predominantly because many windfall sites are being constructed and large local plan allocation sites have not come forward. Prior to this, there were high levels of development in the mid 1990's which relates to the development in parts of north Bracknell. In spite of this a significant number of dwellings are still being built; the total number of completions between 1994 and 2004 was 5,283 dwellings.
- 9.6 The graph below shows the cumulative increase in the number of dwellings built in Bracknell Forest from 1992. This uses 1991 as a baseline, although obviously considerable development occurred prior to this date; a legacy from Bracknell's new town heritage.



Figure 2. Cumulative number of dwellings built from 1992



Between 1991 and 2001 there was a population increase in the Borough of 14.25%, which equates to an increase of 13,668 residents to a population of 109,617.

- 9.7 Despite these increasing population pressures over the past decade, the populations of all three Annex I bird species have increased and the habitat, although classified as unfavourable, is predominantly recovering. Only 1% of the area is classified as declining in quality. As a result it has been concluded that completed proposals will not be included within the Appropriate Assessment as their impact on the SPA has not led to a continuing loss of integrity.
- 9.8 In addition, guidance suggests that future cumulative impacts should be assessed, but on the grounds of legal certainty it would seem appropriate to restrict the combination provision to plans or projects which have already been proposed.
- 9.9 The South East Plan also underwent an Appropriate Assessment of its impacts on the integrity of Natura 2000 sites, including the Thames Basin Heaths SPA. The TBH SPA was identified as a European site for which it was not possible to conclude no adverse effect due to increased recreational pressure associated with developments under the SE Plan. The AA recommended the following as avoidance and mitigation measures which have relevance to the Core Strategy DPD (para. 8.6.8):
- Provision of a buffer zone if no development around the SPA.
  - Encourage the provision of large new parks.
  - Consider whether enhanced open space is needed in line with the consideration of open space provision directed in PPG17.
  - Promote access management.
  - Prevent land take (para. 9.6.2).
  - Development must not result in the loss of habitat used by the three qualifying bird species (11.6.2).

In the submission version of the SE Plan (March 2006), a policy was included with the Western Corridor and Blackwater Valley sub-regional policies to protect the integrity of the SPA, as follows:

**Policy WCBV9: Thames Basin Heaths Special Protection Area**

*New residential development in the sub-region, which could potentially affect the Thames Basin Heaths Special Protection Area (SPA), will be facilitated by a policy in the Local Development Framework for the relevant planning authorities that refers to the need to avoid, or mitigate any potential adverse effects on the SPA and may be supported, where appropriate, by supplementary Planning Documents to assist implementation.*

- 9.10 Each of the affected Local Authorities are in the process of producing a Core Strategy DPD, which will be accompanied by an Appropriate Assessment identifying potential adverse impacts and, where possible, avoiding or removing these.
- 9.11 The Habitats Regulations state that an authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site. Therefore, if the South East Plan Appropriate Assessment and subsequently all of these LDF policies and Appropriate Assessments can conclude no adverse effect, each Local Authority has addressed its own effects arising from an increased population.
- 9.12 Stage 3 of this document proposes avoidance and mitigation measures to remove all adverse effects arising from Bracknell Forest's Core Strategy policies. If these measures can be secured and implemented, resulting in nil detriment, then there will be no adverse impact arising from the proposed Core Strategy policies either alone or in-combination with other plans or projects.

## **10 The Thames Basin Heaths Special Protection Area**

### **10.1 Characteristics and description of the Thames Basin Heaths SPA**

The Thames Basin Heaths SPA was proposed in October 2000, and full SPA status was approved on 9 March 2005. It is an example of a heathland landscape based within a highly active economy. It consists of a composite site covering an area of some 8,274 hectares, consisting of 13 Sites of Special Scientific Interest (SSSI) scattered from Hampshire in the west, to Berkshire in the north, through to Surrey.

The habitat consists of both dry and wet heathland, mire, oak, birch acid woodland, gorse scrub and acid grassland with areas of rotational conifer plantation.

### **10.2 Conservation Objectives**

- 10.2.1 The Directive requires the Appropriate Assessment to be undertaken 'in view of the site's nature conservation objectives' and the European Commission states that the purpose of the Natura 2000 network, which includes the Thames Basin Heaths SPA, is "to preserve biodiversity by maintaining or restoring natural habitats of Community importance."
- 10.2.2 **Conservation objectives** are a statement of measures which are related to the maintenance or restoration of the individual site, and its contribution towards the favourable conservation status of the natural habitats and/or the populations of species of wild fauna and flora for which the site has been selected. The **conservation status** of a species is defined as favourable when the population, range and natural habitats of the species are stable or increasing and population dynamics data indicate the species is able to maintain itself on a long-term basis as a

viable component of its natural habitat. Similarly the conservation status of a habitat is favourable when the range, structure and function, and typical species thereof, are stable or increasing, i.e. there is sufficient geographical extent of the habitat area to sustain the selected species.

10.2.3 The term 'favourable conservation status' is used within the Habitats Directive, and is defined within Article 1:

*"conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2;*

*The conservation status will be taken as "favourable" when:*

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and*
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and*
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis;"*

**Favourable conservation status** is therefore a trend based assessment based on the population as a whole across Europe and not specifically on the Thames Basin Heaths SPA.

10.2.4 Condition assessment is a concept applied to SSSIs rather than SPAs. A condition assessment is an expert judgement of the condition of a site (that is, a site unit) at a moment in time, based upon available information on defined attributes (which may be biological, chemical or physical), for the notified features on the unit at the date of assessment. Put simply, it is a snapshot assessment and is limited to the SSSI site in question. Condition assessment can incorporate the European features and therefore assess their contribution towards the favourable conservation status of Annex I species, but is it not designed to determine favourable conservation status, and the two concepts are not interchangeable.

10.2.5 This is relevant when carrying out an appropriate assessment, which explores the impact of a plan or project on site integrity. For example, this can conclude that where existing pressures do not have a current, readily-measurable impact on condition, but the appropriate assessment has nevertheless identified the risk of such effects becoming manifest in the future, the existing pressure is threatening the ability of the site to 'maintain' favourable condition in the long term and a conclusion of 'no adverse effect on integrity' cannot be recorded. In these cases the **condition assessment** may currently be recorded as favourable.

10.2.6 Article 4(4) of the Birds Directive is also of direct relevance, which also requires that: *"Member states shall take appropriate steps to avoid pollution or deterioration of habitats or **any disturbances** affecting the birds in so far as these would be significant having regard to the objectives of this article".*

10.2.7 In simpler terms, European guidance (European Commission, 2002) suggests that the conservation objectives can be defined by reference to the presence of Annex I habitats and Annex II species. Therefore, to define the objectives for the SPA further information is required on the important populations of birds listed on Annex I of the Birds Directive for which the SPA has been classified.

### 10.3 Qualifying species

10.3.1 This site qualifies under Article 4.1 of the Directive (79/409/EEC) as it is used by 1% or more of the Great Britain population of species of European Importance listed in Annex I of the Directive.

During the breeding season this includes:

- Dartford Warbler (*Sylvia undata*), 445 pairs representing at least 27.8% of the breeding population in Great Britain (Count as at 1999).
- Nightjar (*Caprimulgus europaeus*), 264 pairs representing at least 7.8% of the breeding population in Great Britain (Count mean (1998-99)).
- Woodlark (*Lullula arborea*), 149 pairs representing at least 9.9% of the breeding population in Great Britain (Count as at 1997).

(Reference JNCC, 2001)

The SPA supports the second largest concentration of Dartford warbler in Great Britain, the third largest number of woodlark, and the fourth largest population of breeding nightjars.

10.3.2 The conservation objectives for a site relate to the important populations of birds listed in Annex I of the Birds Directive and populations of 'regularly occurring migrant birds'. **Therefore, the conservation objective for the Thames Basin Heaths SPA can be taken to be 'to maintain at, or restore to, favourable condition, the natural habitats and/or the populations of nightjar, woodlark and Dartford warbler, for which the site has been selected'**. The conservation status of a species is defined as favourable when the population, range and natural habitats of the species are stable or increasing.

10.3.3 The above conservation objective can be broken down into its separate components to assist with the Appropriate Assessment and impact prediction:

- To maintain, in favourable condition, lowland heathland and recently felled and young forestry plantations to provide habitats for Annex I breeding bird populations of woodlark, nightjar and Dartford Warbler.
- To maintain the geographical extent of the habitat area.
- To sustain and improve population numbers of woodlark, nightjar and Dartford warbler.

### 10.4 Non-qualifying species of interest

Hen harrier (*Circus cyaneus*), merlin (*Falco columbarius*), short-eared owl (*Asio flammeus*) and kingfisher (*Alcedo atthis*) (all Annex I species) occur in non-breeding numbers of less than 1% of the GB population.

### 10.5 Seasonality

The breeding season of the protected bird species occurs predominantly in April, May, June and July, but an extended season can occur between March and August, therefore this is when the ground-nesting species are most vulnerable to disturbance. The breeding season for nightjar occurs from mid-May through to August, with a peak

in June; woodlark nest from March until July, but commence territorial activity from early February; the Dartford warbler breeds between April and August.

## 10.6 Condition

Based upon the condition tables for the 13 component SSSIs the condition of the SPA as a whole is as follows:

Favourable – 12.19%  
 Unfavourable recovering – 58.57%  
 Unfavourable no change – 9.19%  
 Unfavourable declining – 20.03%  
 Destroyed / part destroyed – 0.02%

Natural England has commented that the current condition objectives do not as yet include recreational damage on the Annex I bird species as an indicator. Once this indicator is included, a reassessment may result in a greater proportion of the SPA being classified as unfavourable in the future.

## 10.7 Ecology of the qualifying species

The ecology and current status of the three Annex I birds is detailed in Appendix 3. This is based on Species Action Plan objectives taken from the UK Biodiversity Action Plan and current factors which contribute to population size.

## 11 Relationship between the plan area and SPA

11.1 The Thames Basin Heaths SPA covers 12.2% of the Borough of Bracknell Forest, a total of 1,333 hectares.

This is 15.9% of the entire Thames Basin Heaths SPA and is provided in one large block of heathland (1,248 hectares) and a smaller, unconnected area (86 hectares).

Appendix 4 (page 106) shows the geographical distribution of the designated area across the region and within the Borough.

11.2 As an idea of scale, the table below shows how much land lies various distances from the SPA.

**Table 2. Land within various distances from the SPA**

Area	Hectares	% of area
Bracknell Forest Borough	10,937	
Designated SPA within Borough	1,333	12.2
Land within 400m of SPA boundary	852	7.8
Between 400m and 2km of SPA boundary	2,473	22.6
Between 2km and 5km of SPA boundary	2,859	26.1
Over 5km from SPA boundary	3,420	31.3

Source: Bracknell Forest Borough Council GIS, 25 January 2005

## STEP 2: PREDICT LIKELY EFFECTS OF THE PLAN

### 12 Site Integrity

- 12.1 Article 6(3) of the Habitats Directive gives the following guidance as to the way conclusions should be drawn from the Appropriate Assessment:

*“In the light of the conclusions of the [appropriate] assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned.”*

- 12.2 A commonly used definition of site integrity is given in PPG9 (UK Department of the Environment, October 1994) and this is reiterated more recently in the DCLG circular 06/2005 (para. 20) and the European guidance on the provisions of Article 6 of the ‘Habitats Directive’. This defines site integrity as:

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

- 12.3 European guidance goes on to describe the integrity of a site as involving its ecological functions, and the decision as to whether it is adversely affected should focus on, and be limited to, the site’s conservation objectives (EC, 2000).
- 12.4 As discussed in the previous section, the concept of favourable conservation status and the conservation objectives both provide parameters within which an assessment can be made. It is therefore necessary to use this information to predict or forecast what would happen to the SPA habitats and bird populations if the Core Strategy Development Plan Document was adopted and implemented.

### 13 Description of potential adverse effects on site integrity

- 13.1 At the screening stage, Bracknell Forest Borough Council, in consultation with Natural England, the RSPB and Berks, Buck and Oxon Wildlife Trust, identified the following potential effects arising from the plans:

- Fragmentation between heathland
- Fragmentation within heathland
- Supporting habitats
- Predation
- Hydrology
- Pollution
- Enrichment
- Disturbance
- Trampling
- Vandalism (including fire)
- Public hostility
- Management costs



## 14 Plan characteristics which could lead to these adverse effects

- 14.1 Additional residential development within the proximity of the SPA has the potential to increase the population surrounding the site, which could in turn lead to an increase in recreational and urbanisation impacts. Various visitor surveys<sup>8</sup>, of most relevance is Liley, Jackson & Underhill-Day (2005), have indicated people will travel relatively long distances to use such sites for recreational purposes. As a result the impacts from developments up to several kilometres away from the site must also be considered. Natural England's advice based upon visitor surveys is there will be a significant impact arising from new residential development which falls within a 5km straight line distance from the boundary of the SPA.
- 14.2 The Core Strategy proposes a considerable amount of new residential development, in particular policy CS15 sets out provision for 11,139 new residential dwellings and policies CS2, CS3, CS4 and CS5 propose development within the urban area or as urban extensions. As a large proportion of the area outside the 5km zone is metropolitan green belt, and not designated settlement, this locates the majority of development within 5km of the SPA boundary.
- 14.3 Therefore, the two main potential impacts resulting from the implementation of the plans, in particular policy CS15, is:
- 1) An increase in population;
  - 2) An increase in urbanisation.

### 14.4 Quantifying the increased population

#### 14.4.1 Historical average household size

Historically in Bracknell Forest trends show a decreasing average household size (persons per dwelling).

**Table 3. Historical household size**

Year	1961	% fall	1971	% fall	1981	% fall	1991	% fall	2001
Persons / dwelling	3.22	1.86%	3.16	9.49%	2.86	9.44%	2.59	5.02%	2.46

Source: Census data

#### 14.4.2 Projected household size

The (former) ODPM carried out some research on projected future household sizes in the South East and for Bracknell Forest, based upon past demographic trends and using 2003 data. Using these projections of household sizes for England and the Regions to 2026 we can see that for the Bracknell Forest Borough Council a further fall in household size is predicted.

<sup>8</sup> A summary of visitor studies and their findings can be found in Table 1 of English Nature's draft Mitigation Standards for Residential Development, also known as the draft 'Delivery Plan', version 26 May 2006.

**Table 4. Predicted household size**

Year	2001	2006	2011	2016	2021	2026	Average 2001-2026
Persons / dwelling	2.46	2.39	2.33	2.28	2.24	2.21	2.31

Source: HOPS report. 2003 based household projections (Berkshire) ODPM

## 14.5 Projected population arising from the Core Strategy

14.5.1 Policy CS15 within the Core Strategy includes a housing allocation of 11,139 new dwellings, which:

(i) provides for the allocation specified in the submission version of the South East Plan (March 2006), which is currently 10,780;

(ii) also includes the estimated shortfall for the previous period (i.e. 359 dwellings). This arises from rolling forward existing allocations from the Berkshire Structure Plan (BSP) and Regional Planning Guidance for the South East (RPG9). This shortfall consists of dwellings which are within the current development plan, but have not yet been granted permission.

14.5.2 This approach makes the following assumptions

- That the shortfall in dwellings (359 dwellings) is to be carried over into the new plan and split between the first 2 periods - 2006-2017 (11 years).
- The remaining allocation (539 dwellings per annum) is distributed evenly over the 20 year period. Differences arise due to the different length of each period (i.e. 4, 5 or 6 years).

14.5.3 Summary:

**Table 5. New dwellings proposed between 2006-2026**

	2006-12 (6 years)	2012-2017 (5 years)	2017-2022 (5 years)	2022-2026 (4 years)	Total:2006-2026
Dwellings per annum	572	572	539	539	
Total over period	3,432	2,860	2,695	2,156	11,143 (differs from 11,139 as a result of rounding figures up)

## 14.6 Impact of empty households

The average household size does not include empty dwellings, therefore an adjustment should be made to include this impact.

In 2001 there were 44,482 total dwellings and 43,392 inhabited households (Census data). Therefore, the vacancy rate in 2001 can be calculated as the difference between the two figures ( $44,482 - 43,392 = 1,090$ ) as a proportion of the total dwellings. This estimates the vacancy rate in 2001 as 2.45%. This figure is difficult to predict and there is limited confidence in using a figure based on a snapshot in time when in reality this will not be a constant rate. For example, although vacant stock is necessary, an initiative to fill empty homes could drastically reduce this rate, and this is something the planning process has little or no control over. As a result, to accommodate this uncertainty, this rate has been reduced by half to 1.2% in accordance with advice from the RSPB and Wildlife Trust.

All of this information can be used to calculate the population at each interval time period up to 2026.

#### 14.7 Impact of other factors

14.7.1 In some cases, it could be argued that other factors may mean that one new dwelling does not inevitably lead to additional resident, for example parents may build a new dwelling for their children within their curtilage. However, there is currently insufficient evidence to indicate that any of these other factors will continue over the lifetime of the development. Therefore, this Strategy takes a Precautionary approach and has not included the impacts of other factors in the calculations; as a result the predicted population arising from the DPD takes a precautionary approach.

#### 14.8 Impact of outstanding commitments

14.8.1 Outstanding commitments are those which have received consent but have not yet been completed, with or without avoidance or mitigation measures, prior to the SPA being raised as having a significant impact. They may have full permission, outline permission or be subject to a legal agreement. **The outstanding commitments are included within the housing allocation of 11,139**, as they are due to be built during the plan period 2006-2026, despite being issued permission prior to 2006.

14.8.2 In March 2007 legal advice was received which led the Council and Natural England to the view that Regulations 48 and 49 of the 1994 Habitats Regulations, should be applied to applications for approval of reserved matters or variations or renewals, where potential effects on the SPA were not fully considered when an existing permission was granted or where information more recently provided would make for a different assessment of effects.

14.8.3 The net number of outstanding commitments for housing at 31 March 2006 was 4,228 dwellings. This figure includes the following large sites which have either outline or full permission:

- Staff College (606 net dwellings) - outline and reserved matters applications approved;
- Peacock Farm (1,500 net dwellings) - outline approved and a bespoke solution is required when assessing each reserved matters application;
- Bracknell town centre (850 dwellings) - full permission granted as a bespoke solution was provided to remove the adverse effect on the SPA.

Therefore a total of 2,956 dwellings in the housing trajectory are large sites with permission which are required to provide a bespoke solution, or sites which are likely to be reassessed on their own merits at a later date as part of a Regulation 50 review. Other windfall sites and sites which have received consent but not been completed will continue to be considered.

**Table 6. Breakdown of proposed housing**

	<b>Dwellings</b>
<b>Total housing allocation in the Core Strategy DPD</b>	<b>11,139</b>
<b>Housing allocation not likely to have a significant effect</b>	<b>2,956</b>
<b>Housing allocation likely to have a significant effect</b>	<b>8,183</b>
<i>This can be split into:</i>	
<b>Outstanding permissions likely to have a significant effect</b>	<b>1,272</b>
<b>Total unconsented new dwellings likely to have a significant effect (8,183 – 1,272)</b>	<b>6,911</b>

14.8.4 This shows the total amount of consents which are not completed, and have not considered the SPA, is 1,272 and the total unconsented number of dwellings in the Core Strategy policy likely to have a significant effect is 6,911. **Therefore, the figure to be used for the purposes of this document is the total of these = 8,183 dwellings.**

If the total of 1,272 dwellings are built prior to their expiration this would equate to a total of 2,964 additional residents (using an average 2.33 people per dwelling). If these consented proposals are not to be considered as part of this assessment, this would reduce the total population arising from implementation of the plans.

14.8.5 However, Regulation 50 of the Habitats Regulations 1994 requires a review of existing decisions and consents as soon as reasonably practical after the date on which a site becomes a European site. The authority should review their decision and shall affirm, modify or revoke it as necessary. By keeping outstanding permissions in the total review, this shall start to address whether there are sufficient avoidance and mitigation measures for these permissions.

This strategy is not sufficient to discharge the duties under Regulation 50, as this does not make an appropriate assessment of the implications for each site, or address permissions from which the effects cannot be avoided or mitigated by the measures proposed in this Strategy.

The Council will address the requirements of Regulation 50 within a reasonable time and carry this out under existing statutory procedures or under directions from the Secretary of State as to the procedure to be followed, in accordance with the Habitats Regulations.

#### **14.9 Population arising from proposed plans**

The following tables and impact prediction of increasing population and visits to the SPA are based upon best available evidence and estimations. It is vital to note there will be a margin of error in all of these figures, and although precise calculations have been carried out at each stage, the figures have been rounded up to take a precautionary approach and to apply a degree of caution to the results.

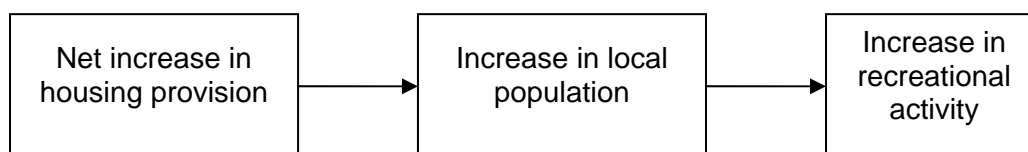
**Table 7. Increased population arising from proposed plans**

Years	2006-12	2012-17	2017-22	2022-26	Total
<b>New dwellings likely to have significant effect</b>	476 <sup>9</sup> <i>(3,432 dwellings within the plan, although 2,956 are not likely to have a significant effect - see page 22 for details.)</i>	2,860	2,695	2,156	<b>8,183</b>
<b>New inhabited households (1.2% adjustment)</b>	470 <sup>9</sup>	2,826	2,663	2,130	<b>8,085</b>
<b>Average household size</b>	2.39	2.33	2.28	2.24	<b>Average 2.31</b>
<b>Population (rounded up)</b>	1,150	6,600	6,100	4,800	<b>18,600</b>

From the above information it can be concluded that the likely population resulting from the implementation of the Core Strategy DPD will be an estimated **18,600 additional residents**. It is important to stress here that, although these calculations are made on best available information, they are an estimation of the additional visitors arising from the plans, and consequently the figures must be considered with this in mind. This report, and specifically these calculations, will be subject to review and monitoring over the plan period to ensure the predictions are sound.

#### 14.10 Calculation of additional visitors resulting from this increased population

14.10.1 As a general rule, the number of walkers, riders, cyclists and motor cyclists using a heathland will increase with an increase in local population, which would indicate a relationship between housing development and recreational disturbance.



In reality this is not likely to be a linear relationship due to the effect of other complex factors, such as the accessibility of the SPA, education, information available and access to other areas of open space. Whilst being mindful of this limitation, it is necessary to be able to quantify the impact arising from the additional residents, therefore a linear correlation has been assumed for the purposes of this assessment.

14.10.2 An estimated scale of use of the Thames Basin Heaths SPA has been calculated at 5.3655 million visits per annum (Liley, Jackson & Underhill-Day, 2005).

<sup>9</sup> This figure within this timeframe has excluded any developments not likely to have a significant effect as the permissions with mitigation measures are likely to be implemented prior to 2011.

These visitors are predominantly believed to come from within 5 kilometres from the SPA boundary, within 15 Local Authority areas. Liley, Jackson & Underhill-Day (2005) state there are, at the present time, an estimated 288,000 residential properties within 5km of the SPA boundary. Using GIS data<sup>10</sup>, it has been calculated that within the Bracknell Forest Borough there are 45,966 residential dwellings within the 5km boundary. A proportional approach can be taken, using the assumption that number of dwellings relates to amount of recreation. Bracknell Forest Borough contains 15.96% of the total number of residential dwellings within 5km of the SPA, therefore can be assumed to contribute towards 15.96% of the total visits. This would calculate the Borough's impact at the current time as 856,356 SPA visits per annum.

14.10.3 The most recent established population figures come from the Census (2001) which recorded the Borough's population at 109,617. In order to be robust and ensure a precautionary approach is taken, this has not been extrapolated into an estimated current population. This figure can be used to calculate the number of SPA visits per annum arising per head of population which shows that, on average, each resident currently visits the SPA: **7.81 times a year**.

14.10.4 If this is extrapolated forward, and it is assumed this rate of visits will remain the same or decline because no plans or projects are currently being approved which would increase this level, the number of visits arising from the new population can be calculated. This amount of new visits per annum works out to an estimated 145,300 visits. To give a degree of scale to this number, this impact is 2.7% of the total number of current visits.

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<sup>10</sup> Source: Bracknell Forest Borough Council GIS Property Gazetteer, July 2006



14.10.5 **Table 8. Summary of calculations to reach the predicted impact**

	Calculation / reference	Result
Total number visits per annum	Liley, Jackson & Underhill-Day, 2005	5,365,500
Total residential properties within 5km of the SPA	Liley, Jackson & Underhill-Day, 2005	288,000
Bracknell Forest Borough residential properties within 5km of the SPA	Bracknell Forest Borough Council GIS Property Gazeteer, July 2006	45,966
Proportion of properties and therefore visits arising from Bracknell Forest Borough	$(45,966 \div 288,000) \times 100\%$	15.96%
Proportion of total visits arising from Bracknell Forest Borough population	$5,365,500 \times 15.96\%$	856,356
Borough population	Census 2001	109,617
Visits per annum per head population	$856,356 \div 109,617$	7.81 (rounded up to 2 d.p.)
New population arising from implementing the plans	See Table 7	18,600
<b>Visits per annum arising from new population (new pop x visits per head pop)</b>	<b><math>18,600 \times 7.81</math> (rounded up)</b>	<b>145,300</b>
% of new visits relating to current total visitors	$145,300 \div 5,365,500$	2.7%

### 14.11 Location of impact

Although the Appropriate Assessment must consider the integrity of the SPA as a whole, the actual sphere of influence of the DPD is likely to be concentrated in a localised area. Appendix 5 (page 107) replicates a map produced from Natural England's visitor research. This demonstrates how current visitors to the SPA, arising from within the Borough of Bracknell Forest, predominantly use Broadmoor to Bagshot Woods SSSI (accessed via the Look Out Discovery Centre car park) and Sandhurst to Owlsmoor Bogs and Heaths (accessed off Crowthorne Road or South Road). Only 4 people in the visitor's survey used other access points. This means that in order to avoid impacts on the integrity of the whole of the SPA, avoiding the impacts on these two component SSSIs must be paramount.

### 14.12 Extent of impact

#### 14.12.1 5 kilometre zone

The calculations in the previous sections have been based upon Natural England's research and evidence base, which focuses upon the zone of 5 kilometres being the area of significant impact.

This is because,

*“5 kilometres appears to provide a suitable outer boundary for determining a zone within which recreation disturbance related mitigation is required – this captures the majority of potential visitors. This has therefore been set as the outer boundary of Zone C.”<sup>11</sup>*

Subsequent research (Liley, Jackson & Underhill-Day, 2005) established that although 100% of visitors on foot arrived from within 5km, only 93% of people arriving by bicycle and 70% of people arriving by car came from within the 5km zone. The study also indicates that 83% of the total number of people arrive by car or van.

Therefore, of the estimated 5.36 million visitors per annum to the SPA, this equates to 4.45 million arriving by car. In view of that, 30% of this figure, which equates to 1.33 million people, travel for over 5 kilometres. This shows that nearly one quarter of all visitors arrive from outside the 5km radius. The report also states that “the majority of people travelling by car came from within a radius of 15km” (page 18, Liley, Jackson & Underhill-Day, 2005).

However, consultation responses to this document and previous correspondence with Natural England indicates that there is a strong correlation of visitor figures up to the 5 kilometre point and Natural England’s current position is understood to be that applying the Delivery Plan zone of 5 kilometres is sufficient to resolve adverse effects arising from development.

A straight-line distance from the SPA boundary is used, instead of travelling distance, because this is the premise used in Natural England’s original visitor research data. Therefore, the strong correlation is between properties within a straight-line distance of the SPA boundary. This was done because access points around the SPA and travelling routes to the SPA, for recreational visitors, are subject to change and new access points/routes may be created, including official, permissive and informal entrances. Given this lack of certainty over the position and type of future access points, a precautionary approach should be taken and therefore the zone has been set as measured from the SPA boundary itself, rather than from existing access points.

Subsequent re-analysis of the visitor data has enabled Natural England to advise that a significant effect on the SPA is likely to arise from development within 5.2km travel distance of the SPA. Until the parameters for the use of this travel data have been established the use of a straight line distance will remain the indicator of significant effect. This approach will be reviewed as additional information is available.

#### 14.12.2 **Bracknell Forest Borough Council visitor research**

Research carried out at various points within the Broadmoor to Bagshot Heaths SSSI in August 2005 (Bracknell Forest Borough Council, 2006a) looked in more depth at the travel distances of different user groups and indicated that those who use the heaths for different purposes have significantly different travel patterns.

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<sup>11</sup> Excerpt from ‘Frequently Asked Questions on the Thames Basin Heaths Delivery Plan’. Letter from English Nature, 28 September 2005

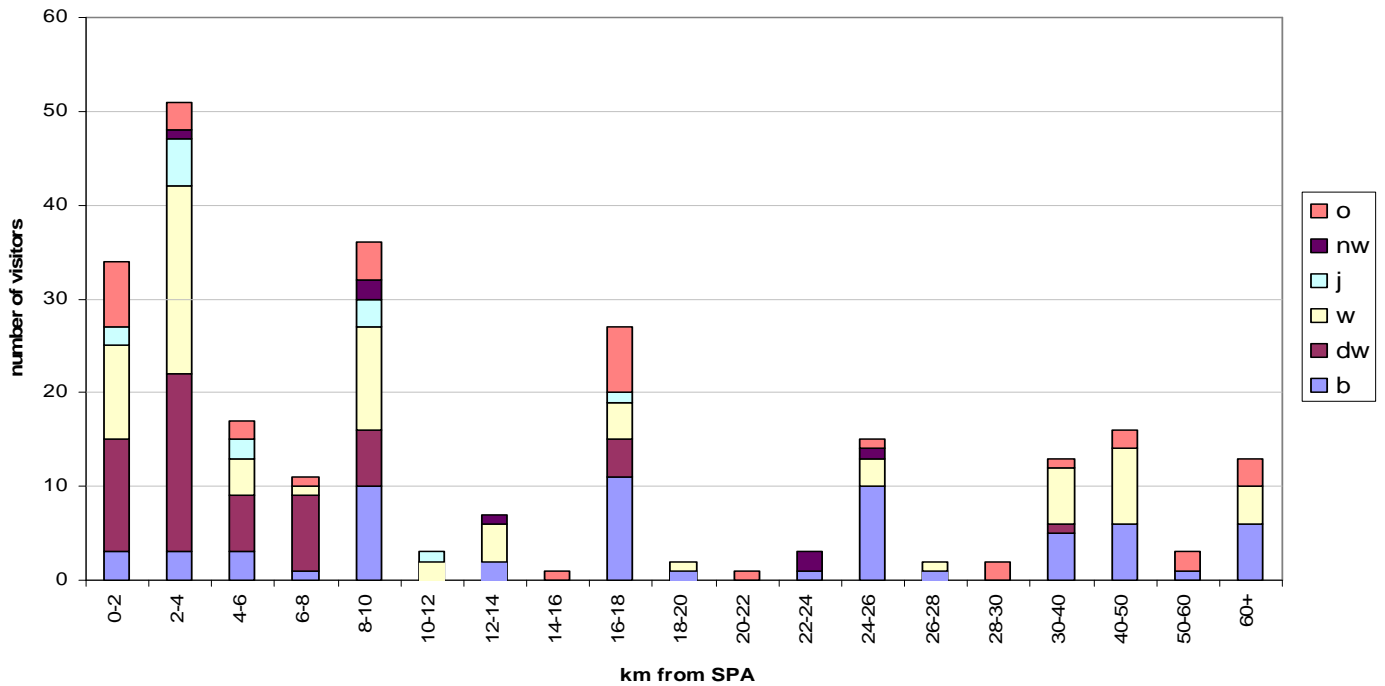
**Table 9. Distances travelled by user group (Bracknell Forest Borough Council, 2006a)**

Use	% of all users (actual no.)	Distance travelled to reach the site (km)		
		Mean	Median (range min. – max.)	Mode
<b>Dog walking</b>	21.9% (56)	5.2	3.2 (1.6–32)	3.2
<b>Walking</b>	30.9% (79)	27.8	8 (0.48–640)	3.2
<b>Cycling</b>	25% (64)	26.2	16.8 (0.8–192)	16
<b>Jogging</b>	5.5% (14)	5.85	4 (1.6–16)	3.2
<b>Nature Watching</b>	2.7% (7)	14.6	12.8 (3.2–25.6)	22.4
<b>Other main reason (e.g. picnic)</b>	14.1% (36)			
<b>TOTAL – all users</b>	<b>100% (256)</b>	<b>21.9</b>	<b>8 (0–640)</b>	<b>3.2</b>

14.12.3 This research indicated that the number of visitors travelling to the SPA does not decrease in a linear pattern in relation to distance from the site. The actual pattern is complex with some visitors travelling long distances to use the heathlands as a recreational resource. Peaks may be a result of the location of adjacent settlements and the distribution of population density within the region. This table also shows the variation in types of use in relation to distance. It clearly indicates that dog walkers travel shorter distances, whereas walkers and cyclists are randomly spread over the distances.

It should be recognised that the wider SPA visitors surveys have identified the Look Out as an anomalous site when compared to the SPA as a whole, but as discussed earlier in the document (page 26) this access point is the area where the impact of the development within Bracknell Forest Borough Council is likely to be significant.

**Figure 3. Distance travelled by visitors to the SPA (Bracknell Forest Borough Council, 2006a)**

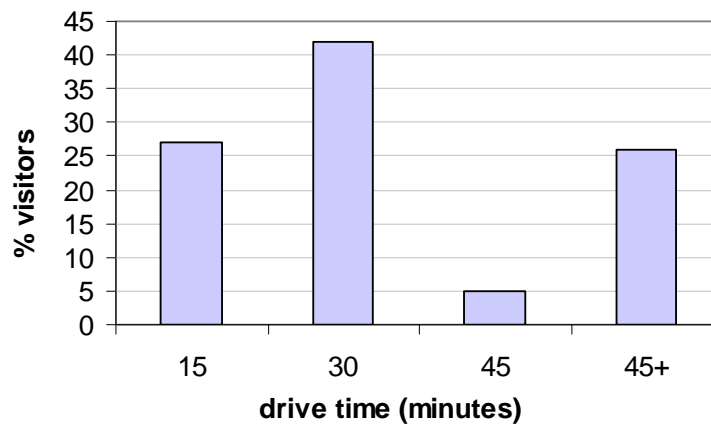


**Key:**

- o = other
- j = jogging
- dw = dog walking
- nw = nature watching
- w = walking
- b = biking

14.12.4 In a 2002 visitor survey those visitors who had driven were asked how long their journey to the car park had taken. The results are shown below.

**Figure 4. Time travelled by visitors to the SPA (Bracknell Forest Borough Council research)**



Accessibility analysis of the SPA within Bracknell Forest Borough (Integrated Transport Planning, 2006) shows that most of the Borough, with the exception of a small area to the very north east, is within 10 minutes drive of the SPA.

#### 14.12.5 Conclusions

**The above information has led the Council to conclude that, in order to remove the adverse impact arising from development within the Borough, avoidance and mitigation measures are required from within a 5 kilometre straight-line distance from the SPA boundary.**

As a result of the research cited in the previous sections the conclusion has been drawn that the adverse effects of additional population occur at an equal level within this zone, for example sites 1.5 kilometres from the SPA are as likely to have an effect as those 4.5 kilometres from the SPA. There is an exception for those within close walking distance (i.e. 400 metres) as discussed in Table 10 (page 32).

Natural England's consultation response (4 October 2006), provided in Appendix 11 (page 167), agrees that this approach reflects the particular features of the Borough and there is no objection to this amendment to the three zones approach suggested in the Delivery Plan.

#### 14.13 Impacts of urbanisation

14.13.1 Liley & Clark (2002) carried out research looking at 'urban development' (as opposed to specifically recreational effects) and its impacts on the Annex I bird species.

14.13.2 They found a clear relationship between the proportion of urban development within 750 metres of a heathland site and the population of nightjars it could support. Sites with more than 45% urban development within 500m of a heathland site were no longer able to support nightjar populations.

14.13.3 Impacts resulting specifically from urbanisation, and not relating to the increase in population, can arise if the increase in urban area leads to:

- Changes in hydrology.
- Pollution.
- Fragmentation between heathlands.
- Loss of supporting habitats, i.e. woodland surrounding the heaths.

### STEP 3: ASSESSMENT OF SITE INTEGRITY

#### 15 Impacts arising from plan characteristics

- 15.1 Once the effects of the plan have been identified and predicted, it is necessary to assess whether any of these will lead to adverse effects on the integrity of the site as defined by the conservation objectives.
- 15.2 As discussed in a previous section (see page 19), the conservation objectives for a site relate to the important populations of birds listed in Annex I of the Bird's Directive and populations of 'regularly occurring migrant birds'. **Therefore, the conservation objective for the Thames Basin Heaths SPA is to maintain at, or restore to, favourable condition, the natural habitats and the populations of nightjar, woodlark and Dartford warbler, for which the site has been selected.**
- 15.3 Therefore the impacts arising from the plan characteristics, shown in Table 10 (page 32), have been viewed in the context of their impacts on the conservation objective of the site, as described above. A precautionary approach has been taken, and adverse effects must be assumed where it cannot be objectively demonstrated, with supporting evidence, that the integrity of the site would not be compromised. The final column in Table 5 gives details of these impacts on the site's integrity.

Table 10. Impacts arising from plan policies

Adverse effects	Impact on conservation objectives
<b>PLAN CHARACTERISTIC: Increased population in close proximity to the SPA (not including recreational impacts)</b>	
<p><b>Vandalism (including fire)</b> – this could potentially increase if population increases in close proximity to the SPA boundary. It is understood that most vandalism occurs by young people who have foot access to the heaths from their homes (English Nature, 26 May 2006).</p>	<p>Nesting birds can be killed by fires, but also heathland fire can damage the habitat of nesting birds such as Dartford warbler. Conversely fire can have a positive effect by encouraging suitable habitat for the other Annex I species, woodlark and nightjar.</p>
<p><b>Enrichment</b> – dumping of household garden waste from houses abutting the heaths can lead to localised nutrient enrichment.</p>	<p>Enrichment can cause nutrient-loving plant species to out-compete heathland species, and fly-tipping of garden waste can introduce non-native species.</p>
<p><b>Public hostility</b> – an increase in the number of local residents who feel a sense of ‘ownership’ of the SPA may increase hostility between users. In addition, nearby residents or users may resist management on the site. Where this has a direct effect on the ability of site managers to maintain or restore favourable condition, this may have an adverse effect on the integrity of the SPA.</p>	<p>The plan policies do not propose habitat management measures, therefore will not have an effect on public hostility.</p>
<p><b>Predation</b> – the RSPB (2002) state that cat predation can be a problem where housing is next to scarce habitats such as heathland, and could potentially be most damaging to vulnerable species, such as the Dartford warbler, which is dependant on a fragmented habitat. Cats will catch prey even if they are not hungry. Cats from developments as far as 1 kilometre from the SPA could travel to the SPA, albeit with diminishing levels with distance from the source. Natural England considers that developments within 400 metres from the SPA lead to a significant level of cat predation whereas the level of cats travelling from over 400 metres is a minority.</p>	<p>Predation of chicks or eggs by domestic dogs and cats resulting in a reduction in species density, which can be as a result of reduced breeding success and reduced nest/territory density.</p>



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Adverse effects	Impact on conservation objectives
<b>PLAN CHARACTERISTIC: Increased recreational activity</b>	
<p><b>Fragmentation within heathland</b> – the proliferation of footpaths and widening of existing tracks may cause isolation of plants and animals.</p>	<p>The paths within the areas of the SPA most visited by residents of the Borough are wide and well-defined and the surrounding habitat is dense and, in many places, contains gorse. Research by Clarke <i>et al</i> (2005) in Dorset found that the majority of people (82%) visiting the SPA stayed on the paths. Therefore fragmentation within the heathland is not likely to have a significant impact which affects the favourable conservation status of the habitat or impact on the populations of protected birds.</p>
<p><b>Predation</b> – dogs walked off their leash could potentially have an effect on predation. There may be a direct effect arising from dogs preying the birds, but more significantly there may be an indirect effect as the dogs temporarily scare ground nesting birds from their nest, leaving the chicks vulnerable to other types of predation.</p>	<p>Predation of chicks or eggs either by domestic dogs and cats or other wild animals as a result of the nests being temporarily abandoned can result in a reduction in species density.</p>
<p><b>Enrichment</b> – dogs walked off their leash could potentially contribute to enrichment of the soil.</p>	<p>Enrichment can cause nutrient-loving plant species to out-compete heathland species, changing the bird's habitat.</p>
<p><b>Disturbance</b> – car-borne walkers, dog walkers and cyclists travel over 5 kilometres to visit the site. These activities have been shown to cause disturbance of the protected bird species, for example dogs off the paths can scare birds off the nests which leaves the eggs or chicks vulnerable to chilling or predation from other sources – see Appendix 6 (page 108) for more information on visitor use.</p>	<ul style="list-style-type: none"> <li>• Increased nest predation by natural predators when adults are flushed from the nest or deterred from returning to it by the presence of people or dogs resulting in reduction in species density.</li> <li>• Chicks or eggs dying of exposure because adults are kept away from the nest resulting in reduction in species density.</li> <li>• Reduced nest/territory density, delayed territory establishment and/or delayed egg laying (i.e. fewer broods in a season).</li> <li>• Increasing stress levels in adult birds resulting in a decreased ability to flee predators and an associated reduction in breeding success and therefore population density.</li> </ul> <p>These factors can all lead to adverse effect on population and less resilience of population to natural factors.</p>

Adverse effects	Impact on conservation objectives
<b>PLAN CHARACTERISTIC: Increased recreational activity</b>	
<p><b>Trampling</b> – an increase in track use and proliferation of the number of tracks could potentially cause habitat erosion and trampling of eggs. The tracks at the particular part of the SPA most used by residents of Bracknell Forest (the two relevant SSSI components) are very well defined and maintained, with clear way-marking. Also, research has shown (Clarke <i>et al</i>, 2005) that visitors stick mainly to the defined routes, so erosion off track is unlikely. However, research at Bourley and Long Valley SSSI (part of the SPA) indicated that 42% of visitors left the main tracks.</p>	<p>Accidental trampling of eggs by people, given that the woodlark and nightjar are ground nesting, will affect bird populations. This is not likely to affect the site to a great degree of significance due to the small numbers, but does not have a <i>de minimus</i> impact. Some parts of the SPA may be more sensitive and prone to trampling; this will be identified through the forthcoming access management plans.</p>
<b>PLAN CHARACTERISTIC: Increased urban area</b>	
<p><b>Fragmentation between heathland</b> – development on areas which are already considered to be fragmenting the SPA could potentially compound the impacts of fragmentation and diminish the heathlands as a single area of functional heathland.</p>	<p>Although territory size depends upon the quality of habitats, as a general rule Dartford warblers have an average territory size of 2.5 hectares although a larger contiguous area of heathland can support higher densities; the minimum territory size required by woodlarks in forestry clearfells in Suffolk is 5ha, although in optimum habitats, territories may be only 1.5 –2ha. Therefore loss of habitat outside SPA but within these territories could lead to a reduction in species number.</p> <p>In addition, grazing is crucial to maintain the SPA habitat in favourable condition. The existence of ‘lay-back’ land provides accessible areas of grazing livestock, which is required to facilitate grazing persistence when the presence of livestock on the SPA is likely to cause damage.</p>

Adverse effects	Impact on conservation objectives
<b>PLAN CHARACTERISTIC: Increased urban area</b>	
<p><b>Supporting habitats</b> - a loss of foraging habitat, particularly woodland, outside the breeding area for nightjars (i.e. the SPA), has been shown to have a negative effect on nightjar densities. Liley &amp; Clarke (2002) found that the amount of woodland (the preferred foraging habitat) surrounding each patch was a significant predictor of nightjar numbers. Further research from radio tracking studies of birds on the Dorset heaths has shown that nightjars can range up to 6km from their nest territory, with an average range distance of 3.1km from the nesting territory (Alexander and Cresswell, 1990). This is to feed on insect rich, semi-natural habitats.</p>	<p>Development on semi-natural areas up to 6km from the SPA boundary, which are found to be rich in invertebrates, may lead to a loss of foraging habitat. A loss of foraging habitat has been shown to have a negative effect on nightjar population densities. Following consultation with the RSPB and Wildlife Trust it was felt that a zone of 400 metres, consistent with the zone to protect against recreational users and cats, would have a significant effect on the protection of foraging habitat, whilst giving more clarity in the planning process.</p>
<p><b>Hydrology</b> – run-off from the urban area could be an issue if sites are within close proximity to the boundary. Due to the strategic level of the plan further analysis is not possible, but hydrological assessments may be required for project level development to determine whether it would result in an alteration of the hydrological regime to the wet areas of the SPA. Development within the catchment area of a water course which enters the SPA could lead to flooding or pollution. In addition, groundwater may be impacted upon by development.</p>	<p>Changes to any water supply entering the SPA, by watercourse or groundwater, may affect the bird species. Nightjars require well drained soils which have the ability to absorb and release solar warmth.</p>
<p><b>Pollution</b> – see comments above. In addition flytipping, in particular of garden rubbish is predominantly restricted to housing on the perimeter of the SPA boundary.</p>	
<p><b>Roads</b> - traffic noise and streetlights.</p>	<p>Breeding birds can be deterred by traffic noise and streetlights can have an adverse effect on the nocturnal feeding of nightjar.</p>

The outcome of this stage of the Appropriate Assessment was to identify those aspects of the Core Strategy where a likely effect on the SPA is confirmed or uncertain. These policies will therefore be carried forward to the next stage of the assessment process to determine whether the effects can be avoided by changes to the Core Strategy policy, or by the use of additional conditional requirements governing the way in which the policy is implemented.

## STEP 4: PROPOSE AND ASSESS AVOIDANCE AND MITIGATION MEASURES

### 16 Avoidance and Mitigation Strategy

- 16.1 Table 10 (page 32) identifies ways in which the Core Strategy DPD could have an adverse effect on the integrity of the SPA. Therefore, as part of the production of the Submission documents it is necessary to devise measures to avoid, where possible, the identified adverse effects. Avoidance measures need to specifically relate to the adverse effects the plan is likely to cause. It is for the competent authority to determine what level of avoidance measures are required, taking into account suggestions from the relevant nature conservation bodies.
- 16.2 A case-by-case approach to avoiding the impacts does not easily lend itself to the assessment of combined and longer-term effects, therefore this Appropriate Assessment aims to address avoidance on a strategic level for all of the predicted impacts.
- 16.3 It is widely recognised that avoidance and mitigation measures are required to safeguard the SPA from recreational impacts arising from new housing development. In the draft Delivery Plan (English Nature, 2006, para. 2.2.4) a three part approach to avoiding and mitigating recreational impacts is recommended:
- On-site habitat management to bring the SPA into favourable condition ensuring the habitat across the site is suitable for the Annex I species.
  - On-site access management to avoid the impacts of current and predicted future users of the SPA.
  - Off-site avoidance measures, for example in the form of alternative greenspace for recreation.

#### 16.4 Habitat Management

- 16.4.1 Habitat management of lowland heathland and young plantations is believed to be the most effective measure to avoid negative impacts on the populations of the protected bird species (UK Biodiversity Action Plan). This will be addressed by Natural England working with the landowners across the SPA to improve any areas of unfavourable or declining condition. This is required by the Government's Public Service Agreement with Natural England, which has set the target that 95% of the area of SSSIs<sup>12</sup> must be in favourable or recovering condition by 2010.
- 16.4.2 Natural England notes that whilst habitat management is essential to ensure the robustness of the SPA and maximise its ability to support the Annex I birds, habitat management alone cannot avoid negative impacts from recreation. Further research is being carried out to support this view.
- 16.4.3 The Borough Council owns and manages a small proportion of the SPA, therefore this could be a relevant avoidance and mitigation measure.

<sup>12</sup> The SPA is comprised of 13 component SSSIs.

## 16.5 On-site access management

16.5.1 Natural England is in the process of producing an Access Management Plan for each component SSSI. This will be based on studies and will include a range of measures including alterations to car parks and footpaths, information boards, and way-marking. It is anticipated the funding for much of this work will be met by Natural England and the landowners (*pers. com.*). The specification for this work is in Appendix 10 (page 159).

16.5.2 However, some access management measures are within the control of Bracknell Forest Borough Council and could be implemented as part of an Access Management Plan currently being produced by Natural England. The most comprehensive approach will be the implementation of access management measures within the control of the Local Authorities, identified through assessments of the effects of DPD, which are implemented alongside the strategic access plans proposed by Natural England.

## 16.6 Off-site avoidance measures

16.6.1 This can be a range of measures, including: the provision of new or enhanced recreational open space, policies to prevent inappropriate development in the most sensitive areas and conditions or restrictions on new dwellings, for example restricting pet ownership.

## 16.7 Inter-relationship between measures

16.7.1 The Borough Council believes that a package of measures is needed which, not only provides attractive alternative opportunities for recreation, but also encourages residents to use these spaces by making the SPA harder to access and less attractive.

16.7.2 Evidence from visitor surveys has shown that people will often travel considerable distances, and past other sites, to visit the SPA as this site offers features that most other green space does not. Not least, in the case of Bracknell Forest, the main feature is that it provides a contiguous area of open space 1,800 hectares in size. In addition, the SPA is already heavily used for recreation, despite the current level of green space provision in the area. The sites passed on route to the SPA are often very attractive, semi-natural sites of a type identified as suitable SANGS<sup>13</sup> in Natural England's research (Liley, Mallord & Loble, 2005). This shows that a more holistic approach to the provision of open space is required, because the provision of additional or enhanced open space in isolation is not likely to reverse the trends shown in visitor surveys.

16.7.3 Therefore, to be effective, an impact avoidance package will be produced which combines both on-site and off-site measures to make the SPA less attractive in addition to making other areas more attractive (a 'carrot and stick approach').

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<sup>13</sup> Semi-natural Alternative Natural Green Space (SANGS)

## 17 Measures to be introduced and how they will avoid or reduce the adverse impacts on the SPA

17.1 Table 11 shows the measures necessary to avoid each adverse effect arising from policy CS15 identified in Table 10 (page 32). The effectiveness of each of these measures and proposed methods of implementation are given in more detail in the following sections.

**Table 11. Measures to avoid adverse effects**

Effects	Proposed measure
<b>Increased population in close proximity to the SPA (not recreational impacts)</b>	
Vandalism (including fire)	<ul style="list-style-type: none"> <li>The Core Strategy policy CS14 has been amended to require any development within 400 metres to be assessed on its own merits with regard to the Habitats Directive. There will be a general presumption against new residential development in this zone, which will ensure no harmful development is permitted within close proximity to the SPA. This may reduce the potential for opportunistic vandalism to the SPA from new local residents, and will help avoid vandalism specifically arising from proximity to the SPA, e.g. flytipping over back garden fences. In addition, an education strategy will help inform people of the sensitive nature of the SPA and wardens can help reduce the level illegal activity on the heathland.</li> </ul>
Predation	<ul style="list-style-type: none"> <li>The Core Strategy policy CS14 has been amended to require any development within 400 metres to be assessed on its own merits with regard to the Habitats Directive. This detailed project-level Appropriate Assessment will ensure no development is permitted with the potential to increase the number of pets in the vicinity, in particular cats, which could predate eggs and chicks. There will be a general presumption against new residential development in this zone.</li> <li>No sites will be allocated, within 400 metres of the SPA boundary, unless it can be proven they will not contribute to an increase in pets.</li> </ul>
<b>Increased recreational pressure</b>	
Predation	<ul style="list-style-type: none"> <li>On-site visitor access management can avoid impacts arising from predation from dogs belonging to current and future dog-walkers. This could include the implementation of a policy of keeping dogs on leads during the breeding season and enforcing this using wardens.</li> <li>Restrictions on pet ownership in new developments, where this can be enforced, will play a part in reducing the levels of dogs and as a result dog walkers.</li> <li>Education can encourage visitors to act in a more responsible and less harmful way.</li> </ul>
Enrichment	<ul style="list-style-type: none"> <li>On-site visitor access management measures, such as wardens enforcing the requirements of the CROW Act and the Clean Neighbourhood Act, in addition to the provision of additional dog-fouling-bins, can reduce enrichment by encouraging and enforcing responsible dog ownership.</li> <li>Education can encourage visitors to act in a more responsible and less harmful way.</li> </ul>



Effects	Proposed measure
Disturbance	<ul style="list-style-type: none"> <li>• Natural England believes that the provision of a significant quantity of new or enhanced semi-natural alternative green space, for new residents to visit for recreational purposes, will keep the levels of visitors to the SPA at the current baseline level.</li> <li>• A review on parking provision at certain points could reduce the amount of visitors to these areas, given that 83% of people arrive by car or van.</li> <li>• 400m is a very easy walking distance and it is highly likely additional residents within this distance from the SPA would be diverted to alternative open space. The Core Strategy policy CS14 has been amended to require any development within 400 metres to be assessed on its own merits with regard to the Habitats Directive.</li> </ul>
Trampling	<ul style="list-style-type: none"> <li>• The provision of clear way-marked routes will encourage users to keep to the paths. This is not within the gift of the Borough Council to implement therefore should be considered as part of the access management across the SPA.</li> </ul>
Management costs	<ul style="list-style-type: none"> <li>• The provision of alternative open space for recreational purposes should stabilise the level of visitors using the SPA at current levels, therefore habitat management costs should not need to be increased from current levels as a result of additional recreational use. Additional access management may be necessary however, as identified in the strategic access management study.</li> </ul>
<b>Increased urban area</b>	
Fragmentation between heathland	<ul style="list-style-type: none"> <li>• Any development within 400 metres of the SPA boundary will require a project-level Appropriate Assessment. Therefore, the area between the two SSSI components of the SPA within the Borough (Sandhurst to Owlsmoor Bogs and Heaths and Broadmoor to Bagshot Woods and Heaths SSSI) can be protected from fragmentation between these sites.</li> <li>• Any land within a 400 metre buffer zone, which is deemed to be of ecological importance in maintaining the bird populations will not be developed (see policy below). In addition, the plans do not propose the use of any land outside settlement in the south of the Borough i.e. Crowthorne or Sandhurst, where fragmentation could potentially occur. This will maintain the functionality of the SPA by ensuring the loss of additional green field sites does not lead to further fragmentation from Castle Bottom to Yateley and Hawley Commons SSSI.</li> </ul>
Supporting habitats	<ul style="list-style-type: none"> <li>• The Core Strategy policy CS14 on the Thames Basin Heaths has been changed to require any development proposed within 400 metres of the SPA boundary to complete an ecological assessment to determine whether that the site may contain suitable feeding habitats for the designated bird species or provide 'lay-back' land for cattle. See Table 10 - Supporting Habitats (page 32) for an explanation of the 400 metre zone.</li> <li>• During consultation the RSPB remarked that it is also necessary to maintain a viable farming community close to the SPA boundaries to ensure there are farmers to look after the stock. However, this is outside the remit of the Council and therefore this could not be enforced as a mitigation measure.</li> </ul>
Hydrology / Pollution	<ul style="list-style-type: none"> <li>• The effects on site hydrology and pollution are localised, therefore the policy CS14, which states all development within 400 metres will be</li> </ul>



Effects	Proposed measure
	<p>assessed on its own merits with regards to the Habitats Directive.</p> <ul style="list-style-type: none"> <li>The project-level Appropriate Assessment may therefore require a hydrological assessment for each development within 400 metres to determine whether it would result in an alteration of the hydrological regime to the wet areas of the SPA. No proposal which has a risk of affecting the integrity of the site by either pollution or hydrological impacts would be approved.</li> </ul>
Roads - traffic noise and streetlights.	<ul style="list-style-type: none"> <li>The Core Strategy does not propose the construction of new roads near the SPA. The Local Transport Plan 2006-2011 has been subject to a Habitats Regulations Screening which concluded no significant effects.</li> </ul>

## 18 Appropriate Assessment Finding's Summary

- 18.1** The table above (Table 11) sets out recommendations which are necessary to address the identified adverse effects arising from the policies screened as having a significant effect.

In summary, if the following recommended measures for each policy are implemented, this will enable this Appropriate Assessment to conclude no adverse effect arising from these policies:

- CS2 - Locational principles**  
A reworded, more comprehensive, SPA policy (CS14), as detailed below, will ensure that promoting residential development specifically within the urban area will have no significant effect.
- CS3 - Bracknell town centre**  
A project-level Appropriate Assessment for this development proposal has already been carried out and concluded no adverse effect. No further action required.
- CS4 - Land at Amen Corner**  
The policy to include additional text to require the development to include, *“Measures to avoid and mitigate the impact of the residential development upon the Thames Basin Heaths Special Protection Area.”* The deliverability of this additional policy text will be addressed in an Area Action Plan scheduled within the LDS to commence in March 2007.
- CS5 - Land north of Whitegrove and Quelm Park**  
The policy to include additional text to require the development to include, *“Measures to avoid and mitigate the impact of the residential development upon the Thames Basin Heaths Special Protection Area.”* The deliverability of this additional policy text is indicated within an indicative masterplan for the area, submitted as part of the Core Strategy DPD. This illustrates the quantity of open space within the proposed area, and identifies that a sufficient level of semi-natural open space can be provided by the development in order to avoid recreational impacts of the new residents.
- CS15 - Overall housing provision**  
1) Include a more comprehensive policy on the Thames Basin Heaths SPA, as follows:

## **CS14 - THAMES BASIN HEATHS SPECIAL PROTECTION AREA**

The Thames Basin Heaths is designated as a Special Protection Area under the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (the "Habitats Directive"). This designation aims to protect a network of sites across Europe which have rare or important habitats or species, in order to safeguard biodiversity. The Thames Basin Heaths SPA covers 8400 hectares within the boundaries of nine Local Authorities in Berkshire, Hampshire and Surrey; 1300 hectares lie to the south of the Borough of Bracknell Forest. The SPA is designated for its ability to provide a habitat supporting breeding populations of Dartford warbler, nightjar and woodlark, which are protected species under the EC Wild Birds Directive.

The sites are protected by the Habitats Directive, which is transposed into UK law by the Habitats Regulations. The requirements of both the Habitats Directive and the Habitats Regulations are prescriptive and provide an absolute measure of whether permission can be given. If an adverse impact is likely, and no mitigation is proposed to remove this impact, the plan or project must be refused. The legal framework leaves no opportunity to balance the protection of the SPA with other material considerations.

A significant impact is likely to occur from a net increase in residential development, leading to an increased population, in an area where the inhabitants of the development are within such proximity to the SPA they are likely to visit for recreational purposes. This zone of significant effect is within a 5 kilometre straight-line distance from the SPA boundary.

The Core Strategy DPD must remove any adverse effects resulting from its policies. The SPA technical background document to the Core Strategy DPD, has identified any potential effects arising from the plan, and put forward the type and amount of avoidance and mitigation measures required to remove these effects.

### ***SPA Technical Background Document***

The document identifies a strategic level of avoidance and mitigation measures, for example the provision of alternative recreational open space and visitor management.

This document has also concluded that any development within a 400 metre straight-line distance of the boundary of the SPA will be assessed on its own merits with regard to the Habitats Directive. If a significant impact cannot be precluded a detailed project-level Appropriate Assessment must ensure no adverse effect. There will be a general presumption against new residential development within this zone which is identified as having a significant adverse effect.

Where a proposed development site lies within 400 metres of the SPA boundary, and is on a previously undeveloped site, the developer must provide an ecological assessment of the potential for the land to provide a suitable feeding habitat for nightjar or as alternative grazing for cattle usually on the SPA (lay-back land). If, in consultation with Natural England, the Council believes this to be a valuable habitat in maintaining favourable

conservation status, development will only be permitted if the same habitat can be re-created elsewhere.

Outside this 400 metre zone, if development identified as having a significant effect can comply with, and contribute an appropriate level towards, the measures detailed in the SPA Technical Background Document the significant effect will be avoided and mitigated. Measures within the SPA Technical Background Document are not able to remove the significant effect of proposals within the 400 metre zone.

In order to assist the Council in making an Appropriate Assessment, the developer will be required to provide such information as the Council may reasonably require for the purposes of the assessment.

#### **POLICY CS14 – THAMES BASIN HEATHS SPECIAL PROTECTION AREA**

**The Council will carry out an assessment of the effects of a development proposal on the conservation objectives of the Thames Basin Heaths Special Protection Area (SPA) where there is a risk of the proposal having a significant impact on the integrity of the site, either alone or in combination with other proposals. Proposals leading to a net increase in residential dwellings, within a straight-line distance of 5 kilometres from the SPA boundary, are likely to have a significant effect. The Council will not permit development which, either alone or in combination with other development, has an adverse effect upon the integrity of the SPA.**

**Development outside the 400 metre zone will be permitted where it can be demonstrated that it can remove any adverse effect by contributing towards avoidance and mitigation measures in line with the SPA Technical Background Document.**

**The effective avoidance and/or mitigation of any identified adverse effects must be demonstrated and secured prior to approval of the development.**

#### **Implementation**

This policy will be implemented through:

The determination and monitoring of planning applications and appeals.

**2)** Set in place a mechanism to deliver other alternative measures and restrictions, for which contributions could be sought to provide appropriate mitigation. Full details of these measures and their deliverability are provided in the Avoidance and Mitigation Strategy provided as part of this Appropriate Assessment document. In order to address all the potential effects from policy CS15, which are not dealt with by the SPA policy, these measures should include:

- Mechanisms for the provision of new and/or enhanced open space.
- Visitor access management.
- Education Strategy.
- Restrictions on pet ownership.

## STAGE 3: SPA AVOIDANCE AND MITIGATION STRATEGY

### IMPLEMENTATION AND EFFECTIVENESS OF AVOIDANCE AND MITIGATION MEASURES

## 19 Strategic Sites

### 19.1 Rationale

Policies within the Core Strategy DPD propose specific, large-scale areas of development, including residential dwellings, which aim to achieve comprehensive sustainable communities. These strategic sites will provide their own bespoke solutions measures to avoid and mitigate against their effects on the SPA. Their ability to do this relates to the large-scale nature of the sites, which presents the opportunity to maintain some of the proposed site as mitigation open space. This is in contrast to windfall and in-fill sites where on-site open space is not available.

These policies comprise:

- Policy CS3 - Bracknell Town Centre Proposal. This already has planning permission, including avoidance and mitigation measures (identified in a project-level Appropriate Assessment), which removed all adverse effects arising from this development. Therefore, the 850 dwellings proposed can be removed from the total dwellings likely to have an impact. This number has therefore been excluded from the calculations below.
- Policy CS4 - Amen Corner, Binfield – this includes the construction of approximately 725 net additional new dwellings.
- Policy CS5 - Land North of Whitegrove and Quelm Park, Warfield – this includes the construction of approximately 2,200 net additional new dwellings.

Therefore the total net dwellings located in strategic sites, which are likely to have a significant effect on the SPA, is **2,925 new dwellings**.

Due to the large-scale nature of the strategic site developments, and the subsequent concentration of new residents arising in these locations, where possible these proposals will provide their own areas of open space on-site, and where not possible then off-site provision is acceptable.

### 19.2 How measure will be secured and implemented

The two strategic proposals, identified in policies CS4 and CS5, will provide their own mitigation as part of a bespoke package. This will be required by the additional policy text within policies CS4 and CS5, which requires the development to include:

*“Measures to avoid and mitigate the impact of the residential development upon the Thames Basin Heaths Special Protection Area.”*

More detail on these measures will be provided by policies within the Site Allocations DPD, to be submitted at a later date, which will include reference to consultation with Natural England.

In addition, to ensure delivery, policy CS4 (Amen Corner) has an Area Action Plan scheduled within the Local Development Scheme; this will address the availability of open space on-site and any potential for enhancements.

Policy CS5 (Land North of Whitegrove and Quelm Park, Warfield) has produced an indicative masterplan as part of the Core Strategy DPD. This illustrates the quantity of open space within the proposed area, and identifies that a sufficient level of semi-natural open space can be provided by the development in order to avoid recreational impacts of the new residents.

The project-level assessment of the location and quality of any open space provision for each of the strategic sites will be carried out as part of the planning application, in consultation with Natural England.

### **19.3 Scale and effectiveness (including degree of confidence of likely success)**

By including, within the DPD policy, the need to provide measures to avoid the impacts on the SPA this has a very high degree of confidence. The indicative Masterplan and Area Action Plan will provide certainty that this can be achieved.

### **19.4 Timescale of implementation**

The open space will be in place prior to the occupation of the residential properties.

### **19.5 Evidence of how the measures will be monitored**

Visitor surveys at the SPA and surveys showing usage of the new open space.

## **20 Open Space**

### **20.1 Rationale**

There is a wealth of existing research and policy relating to open space provision in the Borough. The key elements are detailed below and are presented to give some context to the existing situation within Bracknell Forest. However, it should be noted that these studies were not necessarily focussing on those features which are important to users of the SPA.

#### **20.1.1 Open Space Standards**

The Borough has an existing valuable public open space resource consisting of a wide variety of sites, which are managed by a number of organisations. The existing relevant policies in the Local Plan, to protect and enhance this resource, are as follows:

#### ***Policy R1 – Loss of open space of public value***

*Development will be permitted only where there would be no net reduction of open space of public value or adverse effect on recreational facilities.*

**Policy R4 – Provision of open space of public value**

*In the determination of planning applications for residential development on sites larger than one hectare, the Borough will require by condition(s) or seek by agreement the provision of 4.3 hectares of open space of public value per 1000 people.*

This policy goes on to divide this requirement into 2 hectares per 1000 population for active recreation (e.g. sports pitches, children's play areas) and 2.3 hectares per 1000 population for passive recreation (e.g. parks, planted habitats).

**Policy R5** – *In the determination of planning applications for residential development of a net increase of five or more dwellings on sites of less than one hectare, the Borough Council will seek to enter into a planning obligation with the developer for a contribution towards recreational facilities in the area.*

This aims to protect the increased demand on the existing environment, but does not normally apply to elderly persons' flats, flats and one-bedroom houses.

However, Natural England believes that the current levels of existing open space, and the levels required from new developments, is not sufficient to encourage people away from the SPA.

### **20.1.2 Bracknell Forest Borough Council Parks and Open Spaces Strategy**

Focus groups of local residents carried out for the Bracknell Forest Borough Council Parks and Open Spaces Strategy (2002), supported the concept of strengthening facilities at particular parks to serve the purpose of district parks, and reduce the number of visitors to the Look Out (part of the Special Protection Area). The document states that it is clear there is no scope for a 'Borough' or 'Town' park in the centre of Bracknell.

It was decided consideration could be given to designating and managing the following sites as district level parks:

- Lily Hill Park
- South Hill Park
- Sandhurst Memorial Park

### **20.1.3 Professional expert visits**

An independent study looked at several areas of open space within the Borough and certain criteria were used to evaluate each site. There were some generic issues identified by the study as potential reasons that visitor's expectations were not being met:

- Weaknesses in respect of welcoming, in particular in respect of the entrances.
- Poor on-site information.
- Poor nature of ponds and riverside areas.
- Poor levels of furniture provision.



- Failure to provide surfaced paths to accommodate circulation and through-route needs.

This implies that enhancing these specific areas, amongst others, would increase the attractiveness of the site to existing and new visitors and further encourage use of these sites over the SPA.

## 20.2 Identification of areas of potential alternative open space

The first stage in the assessment of off-site alternative open space provision was the identification of sites. This was carried out in the following way:

A review of existing open space of a strategic size was carried out in order to identify areas where enhancement may be possible to increase visitor capacity. The starting point for this was the emerging PPG17 audit, which identified all areas of publicly accessible open space by typology (for example woodland, football pitch, amenity park). Sites over 5 hectares with typologies parks & gardens (A), natural and semi-natural greenspace (D), urban woodlands (E) and green corridors (F) were considered suitable for potential enhancement, obviously excluding the SPA itself. In addition, smaller sites of these typologies were also considered if they were close to and had good links to other smaller sites, to form a larger total area. In addition, sites of amenity greenspace over 10 hectares were also considered (B).

Natural England proposes access agreements or compulsory purchase could be explored if an area of privately owned greenspace was considered of strategic importance to the network of open space. However, as part of this review no privately-owned land was put forward to the Council as having potential as mitigating open space. As a result, at this stage no privately owned land was considered suitable.

- From this initial list certain areas of open space were removed, which would almost certainly be undeliverable as an avoidance measure, for example privately-owned areas.
- This exercise concluded there were 17 individual areas of open space of a suitable strategic size with the potential to avoid use of the SPA. Their suitability is subject to there being spare visitor capacity and the potential for enhancements to be carried out.

The following sites met the criteria for further assessment of suitability:

- Jock's Copse / Tinker's Copse / The Cut (south)
- Clintons Hill
- Englemere Pond
- Great Hollands recreation ground
- Horseshoe Lake
- Lily Hill Park
- Sandhurst Memorial Park
- Shepherd Meadows
- Swinley Park
- Silver Jubilee Field / Wicks Green, Binfield
- South Hill Park
- Edgbarrow Hill
- Ambarrow Court / Ambarrow Hill



- Garth Meadows
- Larks Hill
- Piggy Wood
- Longhill Park / Milman Close / Beswick Gardens Copse

A land identification exercise on a regional level for SEERA, carried out by Land Use Consultants<sup>14</sup>, concluded some similar results and many of the sites in this study have been analysed in more detail. The sites included in the SEERA study, which were not assessed further, are listed below with reasons for their exclusion.

**Table 12. Excluded sites from the regional open space review**

Site	Reason for exclusion
Mill Park	This was not considered in the review as it is amenity open space (typology B). This area does contain an element of suitable dog-walking open space, but much of the site consists of sports pitches and a skate-ramp.
The Elms	This is 2.7 hectares, less than the 5 hectare threshold. In a late consultation submission, Natural England stated that, as part of a suite of mitigation open space, sites such as these could provide effective mitigation measures if within walking distance of the development. This hasn't been investigated due to the time constraints, but will be examined further.
Bill Hill	This is 4.8 hectares, less than the 5 hectare threshold. In a late consultation submission, Natural England stated that, as part of a suite of mitigation open space, sites such as these could provide effective mitigation measures if within walking distance of the development. This hasn't been investigated due to the time constraints, but will be examined further.
Allsmoor Wood	The location or ownership of this site is unknown.
Land to north of Shepherds Meadows	This is within private ownership and deliverability is unknown.
Further land around Church Farm / Grove Farm lakes	Much of the land is within private ownership and deliverability is unknown.
Land South of Hayley Green / West of Chavey Down	Much of the land is within private ownership and deliverability is unknown. The further investigation referred to in Policy R7 of the Local Plan has not been carried out and this area of open space is not being carried forward into the emerging Core Strategy DPD.

### 20.3 Quality of open space for avoidance purposes

Next, additional information was collated on the 17 suitable sites (or groups of sites) in order to identify the current visitor use and habitat, accessibility and potential for enhancement.

<sup>14</sup> Thames Basin Heaths SPA: Audit and assessment of land to mitigate effects of housing development. Available at: [http://www.southeast-ra.gov.uk/our\\_work/planning/envir\\_waste/index.html](http://www.southeast-ra.gov.uk/our_work/planning/envir_waste/index.html)

The first stage in assessing the suitability of land for impact avoidance purposes is to address its quality and suitability to provide an area equally as attractive as the SPA to encourage new residents to visit this different area as opposed to the protected site.

During a project level appropriate assessment, the advice from Natural England<sup>15</sup> was, “...an area of greenspace is suitable as mitigation where it is self evident that the greenspace is suitable in terms of size, quality, capacity and location. As a general rule, where greenspace is of questionable value as mitigation, we would expect the local authority to seek evidence to satisfy itself that the land is, or could be made, suitable.”

They go on to suggest that the following examples of what could be sought as evidence:

- The site is located in a place which would make it attractive to the particular people most likely to visit the SPA.
- The site is, or could be, of a type which is attractive in terms of its appearance and facilities.
- The site has not heavily used up to now and has the capacity to attract more people of the type who would visit the SPA.

In addition, research by Natural England (Liley, Mallord & Lobleby, 2005) has been carried out to understand why people choose to visit particular sites. This provides an idea of the type of alternative sites which would be attractive to visitors of the SPA and what may deter visitors from certain areas.

The following emerged as major features which would attract them to a site:

- Ability to let the dog off the lead.
- Safety on site.
- A quick journey time and convenient access from home.
- Provision of parking.
- Presence of way-marked paths.
- Presence of water on-site.
- Presence of view points.
- Gravelled, relatively thin paths through deciduous woodland.
- Variety of semi-natural habitats and varied topography.

Research on distance travelled by visitors to the heathland (Liley, Jackson & Underhill-Day, 2005) found dog walkers walked an average of 2.5km, penetrating a mean of 760 metres onto the heath.

Much of this research was amalgamated into a checklist which is provided in Appendix 7 (page 111). This provides a transparent and clear way of ensuring that the enhanced semi-natural open space meets the requirements of a suitable alternative open space.

As a result of the above findings, a considerable amount of research was carried out to establish the ability of each potential area of mitigating open

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<sup>15</sup> A letter dated 24 February 2006 from Samantha King, English Nature regarding ‘Mitigation for the impacts of residential developments on the Thames Basin Heaths SPA: developments close to Lily Hill Park’.

space to meet the criteria set out in Appendix 7, subject to enhancements to the open space. This included:

- Visitor counts and surveys at each of the sites. Visitor counts were carried out for a total of 24 hours at each site, covering 6 different time periods during mornings, afternoons and evenings in the week and on the weekend. 683 surveys were carried out (Leisure-net, 2006).
- A review of the access on each site, including location of car parks, number of parking spaces, formal and informal entrances, length of footpaths (Strategic Leisure, 2006).
- A review of the accessibility to each site, including travel times by car and on foot, using the computer model Accession (Integrated Transport Planning Ltd, 2006).
- A review of legislation covering each site and nature conservation interests (several sources, including Bracknell Forest Borough Council Parks and Countryside Service).
- A review of other research carried out on each site from other available information sources.

#### 20.4 Suitable areas of alternative open space

Appendix 8 (page 111) provides a summary of how analysis of the information collected has been used to establish whether the site meets the criteria to provide a suitable alternative open space.

This analysis gives details of the:

- Main site features
- Nature Conservation Interests
- Legislation covering the site (SSSI, WHS, CROW etc)
- Visitor usage levels and type
- Accessibility from the surrounding area
- Length of footpaths
- Entrances and car parks
- Linkages to other sites
- Potential as avoidance measure

This exercise identified the following areas of open space, which could be secured and enhanced to provide suitable alternatives to use of the SPA over the lifetime of the development. A full description of why these sites were chosen and why others were rejected is detailed in Appendix 8 (page 111).

**Table 13. Suitable areas of mitigation open space**

Open space site	Area
Jocks Copse / Tinker's Copse / The Cut (south) / Garth Meadows / Larks Hill / Piggy Wood	20.94
Shepherd Meadows	33.72
Englemere Pond	27.59
Horseshoe Lake	10.48 (19.38 minus water body of 8.9ha)
Longhill Park / Milman Close / Beswick Gardens Copse / Lily Hill Park / Clintons Hill	37.14

Open space site	Area
Silver Jubilee Field / Wicks Green, Binfield (local site with limited catchment)	3.60
South Hill Park (local site with limited catchment)	19.53
Ambarrow Court / Ambarrow Hill	13.67
<b>Total</b>	<b>166.7 ha</b>

- 20.5** The areas of open space are mapped within Appendix 8 (page 111). The visitor catchment zone around each area of open space has been set at 5 kilometres, as this was the distance within which the majority of visitors were found to arrive. 86% of respondents travelled less than 5 kilometres (38% from within 1km and 48% from within 5km) (Leisure-net, 2006). There are 2 exceptions to this:
- Silver Jubilee Field / Wicks Green, Binfield (4 hectares) which has a catchment of 400 metres due to its smaller size; and
  - South Hill Park (19.5 hectares), which has a catchment of 400 metres due to its more formal nature.

These catchment areas of open space cover the entire Borough with the exception of a very small north-east section; however this area is predominantly designated as a Special Area of Conservation and owned by the Crown Estate so development proposals are highly unlikely to come forward in this area.

A map showing the catchment areas in more detail is provided for each area of open space in Appendix 8 (page 111). This will aid implementation and link development proposals to a particular area of open space.

## **20.6 Carrying Capacity of Existing Space**

Once areas were identified as potentially suitable to provide a function as alternative open space, the capacity of this existing open space must be established in order to ensure they have potential to absorb new visitors. An area will only be suitable alternative open space if either existing capacity can be identified, or if capacity can be increased.

The concept of carrying capacity can relate to various aspects of an area of open space, for example:

- Ecological – this considers the level of use and impacts an area can support before, for example, the following factors are put at risk: soil erosion, pollution of water resource, loss of species or loss of habitats.
- Physical – this considers the threshold limit for space, beyond which facilities are saturated. This usually relates to safety thresholds and is commonly used by Environmental Health when licensing venues and identifying and assessing maximum capacity.
- Social – this is commonly viewed as the level at which visitor enjoyment diminishes and dissatisfaction sets in. Graefe *et al* (1984) define social

carrying capacity further as "the level of use beyond which experience parameters exceed acceptable levels specified by evaluative standards".

- Economic carrying capacity is the level at which visitor interference with non-visitor activities becomes economically unacceptable.

The key component we are concerned with when identifying recreational land as suitable for avoiding the impacts on the SPA is social carrying capacity. However, it is also essential to identify any ecological sensitivities to ensure that any increase in mitigation carrying capacity does not detrimentally impact on the ecology of the site.

### 20.6.1 Social carrying capacity of semi-natural open space

Because social carrying capacity is clearly defined as the maximum level of recreational use, in terms of numbers and activities, above which there is a decline of the recreational experience, from the point of view of the recreation participant, it is consequently a subjective concept. As a result the carrying capacity of an area of open space cannot be expressed as a fixed and rigid value; on the contrary, as defined by other authors (De Ruyk *et al.*, 1997), it should fluctuate between tolerable thresholds, allowing the management of the concept in an integrated, flexible and sustained way. Perceptions of crowding have more to do with the nature of interactions, settings and visitor attributes and expectations than they do with user density. It is likely that the perceptions of visitors to semi-natural open space is that there should be a less crowded environment, i.e. 'wilderness experience' than in formally managed parks and amenity space.

The consensus of much research is that the carrying capacity of an area of open space is difficult to simply relate to the area available to visitors, although this is an important consideration. Other aspects have to be carefully assessed, for example:

- Accessibility
- Car park availability
- Quality of open space
- Existence of amenities
- Provision of information, and in particular
- People's perceptions, behaviour and characteristics (sex, age, socio – economics and cultural background)

The criteria below are widely believed to be a measure capacity:

Physical criteria

- Size of area – total and accessible area
- Length of paths
- Number of parking spaces
- Number of entrances

Psychological criteria

- Visitor perception of impact on environment or of crowding
- Visitor satisfaction
- Complaints or reports of undesirable visitor behaviour
- Amount of litter in areas

The following has been identified by several social scientists as a suitable and realistic methodology to measure social carrying capacity:

- 1) Establish existing conditions requiring judgmental inputs from users
- 2) Document visitor particulars including:
  - a. frequency of site visits
  - b. group size
  - c. length of stay
  - d. activity patterns
  - e. expectations and preferences
- 3) Number of visitors in area per day
- 4) Accessibility to the site
- 5) Visitor perception of impact on environment and of crowding
- 6) Visitor satisfaction

Using this methodology, and the results of visitor research and the PPG17 study, an analysis has been undertaken of whether each area of open space is above or below its social carrying capacity. This can be found in Appendix 8 (page 111).

#### **20.6.2 Mitigation carrying capacity for open space**

The concept of social carrying capacity, as discussed in the previous section, does not relate specifically to the ability to draw people away from the SPA. Therefore, this is a specific category of social carrying capacity, which we can call **mitigation carrying capacity**. Mitigation carrying capacity is exceeded if facilities are saturated so they no longer provide a draw away from the SPA, if visitors become dissatisfied or environmental degradation occurs.

Whilst acknowledging the difficulties highlighted in previously quoted research on the impractical nature of establishing a fixed value, for the purposes of this strategy it is important to quantify a level at which mitigation open space will be sought.

English Nature's draft Delivery Plan (2006) uses open space standards for the provision of mitigating open space of 16 hectares per 1000 new population for a zone between 400 metres and 2 kilometres from the SPA boundary and 8 hectares per 1000 new population for a zone between 2 kilometres and 5 kilometres. They believe that at these levels of provision the open space will draw new residents away from the SPA, whereas at lower levels the mitigation carrying capacity is exceeded. This demonstrates that, according to the Delivery plan standards the mitigation carrying capacity of an area of open space between 400 metres and 2 kilometres from the SPA is 16 hectares per 1000 new residents.

#### **20.7 Open space standards**

**Having reviewed Natural England's research, and undertaken local research, the conclusion has been drawn that an average open space standard of 12 hectares per 1000 new population across the Borough is more appropriate to local circumstances, in the place of the standards of 8 and 16 hectares in the draft Delivery Plan.**

This is because evidence from within the Borough does not show that residents from between 400 metres and 2 kilometres are twice as likely to use the SPA as those over 2 kilometres (see Figure 3, page 29); instead there is a relatively even spread of visitors coming from all distances. It was therefore felt the use of two standards would not be robust.

An average of the two standards was reached after an analysis of windfall sites identified in the Urban Potential Study. The location of these showed a split between the zones as follows:

- 4.8% within 400 metres of the SPA
- 33.9% in the 400m-2km zone
- 61.3% in the 2km-5km zone

In addition, the two strategic housing sites, delivering a total of 2,925 new residential dwellings, are both located in the 2 to 5 kilometre zone. This shows that the majority of new housing will occur in the 2km-5km zone, for which a level of 8 hectares per 1000 population is suggested by the Delivery Plan. Therefore, the use of an average of 12 hectares will, overall, exceed the amount of open space secured than if the zonal approach were used with two Delivery Plan standards. A lower standard has not been used, closer to the 8 hectare per 1000 standard to ensure a precautionary approach as the Strategy is mainly addressing enhancements to existing open space as opposed to the provision of new open space.

Within Natural England's consultation response (4 October 2006) they consider that the approach of using a composite 12 hectare standard, as opposed to the 8 hectares and 16 hectares standards within the Delivery Plan, would present no additional risk to the SPA over and above the use of 2 standards. However, they go on to state that if this single standard is adopted, the distance criteria and minimum site sizes set out in the Delivery Plan should apply. Further analysis into, and discussion on, the areas of open space will continue with Natural England as new areas of alternative open space emerge.

## **20.8 Current usage of each area of open space**

The study by Leisure-net (2006) established the total number of annual visits to the areas of open space and adjusted this to account for seasonality.

The survey collected over 400 hours of visitor usage data at 17 parks, over the time period 7am to 7pm on weekdays and weekends. In addition 683 people were interviewed in more depth. The findings of the whole survey have not been repeated within this document, but the report is available to review at Bracknell Forest's website [www.bracknell-forest.gov.uk](http://www.bracknell-forest.gov.uk).

Data was also collected on the frequency of people's visits, therefore this can be used to estimate the number of people using each site. This data on local frequency of visit relates well to national benchmarks.



**Table 14. Calculation of open space use**

<b>% of people visiting</b>	<b>Frequency (visits per week)</b>	<b>Visits per person per week</b>	<b>Visits per person per year (rounded up)</b>
34%	6.50 (either 6 or 7)	2.21	115
6%	4.50 (either 4 or 5)	0.27	14
21%	2.50 (either 2 or 3)	0.53	28
14%	1.00 (once a week)	0.14	7.5
25%	0.30 (less than once a week)	0.08	4
100%		3.22	168

*Source: Leisure-net (June 2006) Parks and Open Spaces Users Survey*

This shows that 1 person who regularly visits the open space, on average, visits approximately twice week and makes 168 visits per year.

This figure can then be used to establish the number of people in the locality who use each area of open space; this is calculated in Table 15.

Once the existing level of visitor use has been calculated, and the theoretical mitigation carrying capacity has been calculated (based upon the 12ha/1000 standard), any actual mitigation capacity is the difference between these two figures, as demonstrated in the final column of the table below.

**Table 15. Mitigation carrying capacity of open space**

Open space	Total visits per year to the open space	Equivalent number of visitors (rounded up) <sup>16</sup>	Area of open space (ha)	Capacity to mitigate (12 ha/1000). See page 52.	Potential visitor capacity (rounded down)
Jocks Copse / Tinker's Copse / The Cut (south) / Garth Meadows / Larks Hill / Piggy Wood	116,000	700	21	1,745	1,000
Longhill Park / Milman Close / Beswick Gardens Copse / Lily Hill Park / Clintons Hill	123,000	750	37	3,095	750 (2,350) <sup>17</sup>
Englemere Pond	10,000	60	28	2,299	2,200
Horseshoe Lake	30,000	180	11	917	730
Shepherd Meadows	90,000	540	34	2,810	2,250
Silver Jubilee Field / Wicks Green, Binfield	14,000	85	4	300	200
South Hill Park	94,000	560	20	1,628	1,050
Ambarrow Court / Hill	32,000	190	14	1,139	900
<b>TOTAL</b>					<b>9,080</b> (10,680)

Therefore the open space listed above has the capacity to mitigate against a total of 9,080 additional people if enhancements are implemented.

## 20.9 Enhancements to increase capacity

The draft Delivery Report (English Nature, 2006) states that alternative open space can be existing sites with some public access where it is considered that SANGS could be provided by changing the nature of the site, its management and/or the management of access on the site.

Any deficits in provision or quality of each area of open space were established by the collection of data in earlier stages of the assessment (shown in Appendix 8). This information, in addition to the professional expertise of employees with responsibility for managing open space within the Borough, was then used to collate a schedule of specific improvements to individual sites, which would lead to an increase in mitigation carrying capacity on the selected areas. The key elements of these enhancements were to increase accessibility of the sites and to provide a well-designed

<sup>16</sup> The number of visitors using the open space was calculated by dividing the number of visits to the park, by the average number of visits made by users per year [see Table 14].

<sup>17</sup> Lily Hill Park has already been used as mitigation for Bracknell town centre redevelopment, therefore capacity for a potential 1600 new visitors has already been allocated. The figure shown has been adjusted accordingly, with the original figure in brackets.

round walk (preferably way-marked) of 2,500 metres (English Nature, 2006). This information is provided in full in Appendix 9 (page 154).

#### **20.10 How measure will be secured and implemented**

The total costs of enhancements presented in Appendix 9 will be added to the total mitigation package, which will be funded by proportional developers' contributions. The Limiting the Impact of Development Supplementary Planning Document will provide planning policy on the exact level of contributions proportional to the number of residential dwellings.

#### **20.11 Scale and effectiveness (including degree of confidence of likely success)**

The increase in capacity as a result of the proposed enhancements, will therefore relate to a specific number of people, which in turn relates to a specific amount of new development.

Therefore, assuming the enhancements to the site are capable of being sufficiently enhanced to absorb the correct number of visitors, the areas of open space listed above can provide mitigation for a total of **9,080** new residents.

#### **20.12 Timescale of implementation**

The broad enhancements to various areas of open space are provided in Appendix 9 (page 154). This will be implemented as a rolling programme of works as development occurs funded by developer's contributions.

#### **20.13 Open space management plan approach**

Due to the strategic nature of this Strategy in addressing the housing development over 20 years, it is difficult to know what additional works will be required to be carried out to maintain the alternative open space in suitable condition. Also, future monitoring and surveys may indicate additional works or improvements, which were not originally included, that could improve its suitability as semi-natural alternative open space.

As a result, the approach taken to open space will be a 'mini-plan' methodology, which is also being developed by several other Local Authorities surrounding the Thames Basin Heaths SPA, supported by both Natural England and GOSE. This Document sets out the principles and identifies areas of suitable open space, then an open space management plan (i.e. mini-plan) will give full details of the exact works to be carried out at each site over the subsequent 5 year period. The mini-plans will therefore be reviewed every 5 years in consultation with Natural England.

## 21 Visitor Access Management (parking – reduction and restriction)

### 21.1 Rationale

Parking plays a large role in encouraging visitors to the SPA, with sites with large car parks having the highest hourly rates of visitors (Table 5, Liley, Jackson & Underhill-Day, 2005). The provision of parking was also identified as an important feature in the selection of a particular site, scoring an average of 4 out of 5 (where 5 is 'very important') (Liley, Mallord & Loble, 2005). In addition, convenient car access and the provision of parking were rated in surveys as a reason for choosing to visit the SPA (Bracknell Forest Borough Council, 2006a). Reducing the levels of both formal and on-road parking can therefore reduce the levels of visitors to the site. In addition, creating barriers to the use of car parks, such as by implementing car park charges at the most sensitive sites can encourage people to use alternative open space where parking is free.

**Table 16. Parking facilities in the Borough serving the SPA**

SSSI	Car Park Location	Number of spaces	Managed by
Broadmoor to Bagshot	Look Out, Nine Mile Ride	230	Bracknell Forest Borough Council
Broadmoor to Bagshot	Crowthorne Woods, off Bracknell Road	20	Forestry Commission
Broadmoor to Bagshot	Hut Hill, Foresters Way	10	Bracknell Forest Borough Council (exits on to FC land)
Sandhurst to Owlsmoor	Wildmoor Heath, off Crowthorne Road	12	Bracknell Forest Borough Council
Sandhurst to Owlsmoor	South Road	2	Bracknell Forest Borough Council

The car park serving the Look Out Discovery Centre is the largest in size and has the highest level of visitors. However, this parking is not solely for the SPA as many visitors use the car park when visiting the Discovery Centre, the children's play area, Go Ape, café and other facilities. There is also a large car park over the road from this which is used by visitors to Coral Reef swimming pool and a private health club, which would need to be included in any parking management scheme in order to prevent displacement. In addition, the Discovery Centre car park is often at capacity, with no spaces at peak times, therefore displacement to this area, from the other parking areas, is not possible.

There is an issue of displacement which may arise because if cars are not able to use their usual parking spot, they may drive to the next car park on the SPA. This is partially addressed by this package of mitigation measures which aims to enhance other open space in the vicinity to encourage people to visit there instead.

By enhancing green space to encourage dog walkers, this will help address the issue of displacement to other SPA sites.

## 21.2 Scale and effectiveness (including degree of confidence of likely success)

### **To illustrate: reduction in parking spaces**

Table 5 in the research by Liley, Jackson & Underhill-Day (2005) indicates there are 3.9 visits per hour by vehicles on those sites with a small car park (i.e. less than 20 cars).

If we assume this also to be the case for a small 10 space car park, or even a larger car park reducing capacity by 10 spaces, the number of visitors to this site can be extrapolated to calculate the total visitors per site, using the methodology suggested by Liley, Jackson & Underhill-Day (2005).

Mean number of people entering per hour by vehicle	3.9
Hours in the day	14
Total visiting access point per day by vehicle	54.6
Total using access point per year by vehicle	19,929

Therefore the removal of this car park could result in an estimated reduction of **19,900 visits** (rounded down).

This is an indicative figure however, assuming that all car park users are unable to simply park elsewhere. Research on other areas of open space has indicated that visitors will often travel to the next nearest car park, therefore visitor numbers would not reduce. This highlights the importance of a strategic access management approach.

## 21.3 How measure will be secured and implemented

Until a more comprehensive Access Management Plan is produced for the whole of the SPA, a detailed list of actions is unable to be produced within this Strategy. Therefore, although the potential number of visits reduced by car park management may be high, the exact level of avoided visits is uncertain.

## 21.4 Timescale of implementation

Following consultation comments, and taking a precautionary approach, the preferred method of implementation is not to introduce the suggested access management measure in isolation of a wider, strategic assessment of access across the SPA. As a result the finalised measures proposed should be included as part of the Access Management Plan currently being produced by Natural England (see specification in Appendix 10, page 159). Therefore developments from within the Borough will fund works within the Borough, but this will be implemented as part of a more strategic approach to access management.

## 21.5 Evidence of how the measures will be monitored

Prior to the implementation of any parking management, a baseline study of car park use across all areas of open space will be undertaken. This will be repeated when the strategy is reviewed to monitor whether parking levels have fallen due to the charging, and if more people are parking at the alternative areas of open space.

## 22 Visitor Access Management (encouragement / enforcement)

### 22.1 Rationale

Dogs are understood to be the main contributing factor affecting the integrity of the SPA, due to the nature of dogs roaming more widely than their owners into the bird's habitat and because of their natural predatory habits. A study by Clarke *et al* (2005) found that although 82% of dogwalkers stay on the main tracks, 47% of dogs go off the paths. In addition, 59% of all visitors to the SPA are dog walkers and this type of visitor come on a more regular basis, with 83% of daily visitors being dog walkers (Liley, Jackson & Underhill-Day, 2005).

By keeping dogs on their lead this will have a two-pronged approach:

1. Discourage those visitors whose main reason for visiting the site is to walk their dog off the lead.
2. Reduce the impact of the dog walkers which remain by disallowing their pets to roam from the designated paths into the bird's nesting areas.

Taylor *et al* (2005) reported on the impacts of dogs in areas of nature conservation, including an extensive literature review. This concluded that dog management policies vary in effectiveness but wardening, steering and regulations appear to work best, whilst leaflets and signage are less effective, except as part of a comprehensive strategy.

The report goes on to suggest avoidance measures including keeping dogs on leads or under close control. Under the Countryside and Rights of Way Act (2000) (CROW Act) dogs must be kept on a short lead (i.e. less than 1 metre) on open access land from 1 March – 31 July. The breeding season for nightjar is longer than for most birds, and extends through August. Therefore the national restriction to keep dogs on leads from 1 March to 31 July would not be sufficient to prevent disturbance during the particularly sensitive time of the breeding season. Therefore, on this site, the period during which dogs must be kept on a lead has been extended for an extra month. Although it is a legal requirement for a dog to be kept under close control on a public right of way, it is not a requirement for them to be kept on a lead. Consequently, more effort can be made to encourage dog owners to keep their dog on a lead, and to reinforce this message as much as possible.

During the promotion of alternative open space, this higher-level strategy will provide positive messages to the public about where dogs are allowed to be

let off the lead (but still under close control to meet other legislative requirements) or on longer leads.

This measure will need to be made without breaching public rights of access and within the legal framework. The Clean Neighbourhoods and Environment Act 2005 provides for Dog Control Orders to replace the previous system of dog byelaws and the Dogs (Fouling of Land) Act 1996. The penalty for committing an offence contained in a Dog Control Order is a maximum fine of level 3 on the standard scale (currently £1,000). Alternatively, a fixed penalty may be charged in place of prosecution. The Dog control order provides for five offences, one of which is not keeping a dog on a lead.

Anyone exercising the CROW right of access has the right to bring a dog with them except where any general restrictions in Schedule 2 or individual restrictions imposed under Chapter II apply. However, as a Dog Control Order is made under powers contained in a general public Act such an Order, including any ban on dogs, would apply on CROW access land.

## 22.2 How measure will be secured and implemented

The area within the SPA designated under the CROW Act in Bracknell Forest is displayed on the Countryside Access webpage (<http://www.countrysideaccess.gov.uk>). The map has not been reproduced in this document for copyright purposes, but it includes 79 hectares of land designated as Open Access at Wildmoor Heath, Crowthorne / Sandhurst - owned and managed by Bracknell Forest Borough Council and the Berks, Bucks and Oxon Wildlife Trust (BBOWT).

In addition, an area of 165 hectares at Crowthorne Woods, owned and managed by Forest Enterprise, has been voluntarily dedicated for Open Access under the CROW Act.

Initially, this will be enforced by providing clear and obvious information boards at all access points to the SPA and at intervals throughout the site (e.g. at the confluence of paths) and educate dog walkers via the press and leaflets. This educational information will also give details of other sites where dogs may be walked off the lead.

Once this has been achieved, the avoidance measure will be enforced by wardens patrolling the entire site. They will have the ability to give on the spot fines to anyone walking their dog off the lead.

## 22.3 Scale and effectiveness (including degree of confidence of likely success)

1. Encouraging people to use other sites

The total number of new dog walkers on the SPA, arising from the implementation of the DPD is estimated to be 59% of the total number of annual visits (based on visitor research); this is estimated at **86,000 visits per annum** (rounded up). Research (Liley, Mallord & Lobley, 2005) into the features which attract people to open spaces suggested that dog walkers rate very highly the ability to be able to take their dogs off the lead; on average they scored this reason as 4.75 out of a total of 5 ('very important'). This



same research indicated that 32% of dog walkers were reluctant or unwilling to keep their dog on a lead and would use other sites if this measure was enforced.

This suggests that if the requirement to keep dogs on the lead during breeding season were enforced, in addition to the provision of other areas where this could occur, this would deter nearly a third of all visits from dog walkers, **calculated to be an estimated 27,500 visits per annum.**

## 2. Reduce the impact of dogs

As the visitors scored 'being able to let the dog off the lead' as of high importance, it can be assumed that the majority do let their dogs roam at least during part of the visit. Therefore controlling the existing 86,000 visits with dogs will have additional benefits. Research by the Countryside Agency<sup>18</sup> found that grouse are seven times more likely to be flushed from the nest if the dog is off the lead. Grouse are birds of upland heaths, so it is not scientifically sound to directly apply the research to devise a specific figure. However, this species is ground nesting, therefore the principle of increased disturbance from dogs, than from walkers on their own, can be assumed to be comparable, even if the probability is not equivalent.

Nevertheless, this research indicates that it is highly likely that by controlling dogs the impact of the remaining visits per annum is considerably reduced. However, until a more comprehensive Access Management Plan is produced for the whole of the SPA, with input from the site owners, the exact level of avoided visits remains uncertain.

However, where dog walkers have become accustomed to using an area to walk their dogs off the lead, it seems likely that it will be difficult to enforce a 'dogs on leads' policy without the provision of alternative dog walking areas, significant input of wardening time and effort and a commitment to back-up such a policy with legal action where necessary. This introduces a degree of uncertainty into the ability to deliver such a policy in the short term, although in the longer term this could be effective, as people are encouraged to use other sites.

### 22.4 Timescale of implementation

As with the previous measure, following consultation comments, and taking a precautionary approach, the preferred method of implementation is not to introduce the suggested access management measure in isolation of a wider, strategic assessment of access across the SPA. As a result the finalised measures proposed should be included as part of the Access Management Plan currently being produced by Natural England (see specification in Appendix 10, page 159). Therefore developments from within the Borough will fund works within the Borough, but this will be implemented as part of a more strategic approach to access management.

### 22.5 Evidence of how the measures will be monitored

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<sup>18</sup> Impact of Public Access on Grouse Management. A Report to the Countryside Agency by Professor Peter Hudson, Institute of Biological Sciences, University of Stirling  
([http://www.countryside.gov.uk/LAR/Recreation/NCAF/NCAF6\\_2.asp](http://www.countryside.gov.uk/LAR/Recreation/NCAF/NCAF6_2.asp))

Spot checks on the number of dogs found off the lead can give an idea of the effectiveness of this measure. This will be carried out as a baseline study prior to the implementation of the measure, and again when the strategy is reviewed.

## **23 Presumption against residential development within 400 metres of the SPA boundary**

### **23.1 Rationale**

Many of the impacts identified previously within this Strategy, for example local recreational impact can be reduced, and vandalism and predation (see Table 10, page 32), can also be reduced, by precluding a net increase in residential development adjoining the boundary of the SPA and within a range where predation from cats is likely to be a significant factor.

In addition this policy will, over time, actually reduce the amount of people living within the 400 metre zone as average household size decreases. This will result in a positive impact on visitor numbers arising from within this distance.

The approach should not only consider residential development. Commercial development may also have adverse impacts as a result of the following potential impacts:

- Changing hydrology.
- An increase in air and water pollution.
- An increase in noise.
- Increased traffic movements.

A 400 metre straight line zone from the boundary of the SPA has been chosen for several reasons:

1. Cats do not follow traditional paths or roadways; they are likely to roam across fields and over barriers such as fences, therefore a straight line distance is most appropriate in this case.
2. Access points around the SPA and travelling routes to the SPA, for recreational visitors, are subject to change and new access points/routes may be created, including official, permissive and informal entrances. Given the lack of certainty over the position and type of future access points, a precautionary approach should be taken and therefore the zone has been set as measured from the SPA boundary itself, rather than from existing access points.
3. Modifying the zone to account for all existing access points and/or perceived barriers to access, would result in a complex and confusing zone boundary which is difficult to use on the ground.

This is consistent with Natural England's approach and justification. In an information sheet distributed to Local Authorities <sup>19</sup> Natural England gave the following reasons for a 400 metre zone.

**“11. Why has 400m been chosen for Zone A?”**

*It is considered that 400 metres would represent a sensible boundary for the first zone around the SPA; this represents the zone of highest potential impact on the SPA from new residential development and the greatest proportion of visitors arriving on foot.*

*Visitor surveys reviewed in the Delivery Plan suggest that there is a range of potential figures for walking distances to the heaths, ranging from the generally accepted 300 metre ANGst model and the 400 metre GLA figure, to 800 metres used as a range in the MORI report. Nevertheless, the surveys strongly suggest 400 metres from the heathland edge would “capture” the majority of potential visitors on foot.*

*In addition, it is apparent from research (including the review by Underhill-Day) that a range of urban impacts, such as garden extensions, fly-tipping and fires are potentially more significant when the urban area is within 500 metres of the heathland boundary. It is also apparent from the Underhill-Day review, and that carried out for the QEII Barracks development at Bourley (Terence O'Rourke 2004), that the number of cats ranging further than 400 metres is significantly less; Barrett (1997b) found that although the nocturnal ranges of cats varied, only 40% travelled further than 400m. This corresponds to Turner and Meister (1988) who found that the mean range of cats was 371m although the maximum range was 1578m.*

**23.2 How measure will be secured and implemented**

This restriction has been added to policy within the Core Strategy DPD to ensure that this premise is integrated at a strategic level, instead of relying upon project level Appropriate Assessment.

Therefore policy CS14: Thames Basin Heaths Special Protection Area within the Core Strategy will include the following text:

*“Any development within a 400 metre straight-line distance of the boundary of the SPA will be assessed on its own merits with regard to the Habitats Regulations. If a significant impact cannot be precluded a detailed project-level Appropriate Assessment must ensure no adverse effect. Within this zone a significant adverse effect can only be avoided or mitigated in exceptional circumstances, therefore there will be a general presumption against new residential development within 400 metres of the SPA boundary.”*

In addition, sites which have been proposed, which fall solely within the 400 metre zone, will be excluded from the Site Allocations DPD submission document.

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<sup>19</sup> 'Frequently asked Questions on the Thames Basin Heaths Delivery Plan'. English Nature, 28 September 2005.

### 23.3 Scale and effectiveness (including degree of confidence of likely success)

The approach above will be very effective in avoiding the effect of local users walking on the SPA and the significant additional impacts arising from vandalism and predation. The strategic nature of the policies and their considerable weighting following Examination of the DPD, leads the Borough Council to conclude a very high degree of confidence that these measures will be effective.

This approach will also contribute to a reduction in the number of visitors to the SPA for recreational purposes. Table 8 (page 26) calculates the additional visits likely to arise from the dwellings. Liley, Jackson & Underhill-Day (2005) found that across the SPA:

Method of travel	Total % of visitors arriving	% from within 400m
Car	83%	1%
Foot	13%	40%
Bike	4%	7%

Using these figures it can be predicted that of the 145,300 additional visits arising from the implementation of the DPD:

Method of travel	Additional visits arising from DPD	Additional visits from within 400m
Car	120,599	1,206
Foot	18,889	7556
Bike	5,812	407
<b>TOTAL</b>	<b>145,300</b>	<b>9,169</b>

This shows that without impact avoidance measures it can be assumed a total of an estimated **9,100 new visits** (rounded down).

The impact of this measure is likely to be cumulative because local visitors also appear to be the most frequent users, therefore reducing the amount of visitors from the 400 metre zone will disproportionately decrease the number of visits. However, the research does not provide a summary of visitor frequency compared to distance travelled, therefore in the absence of scientific data to calculate this impact a precautionary approach has been taken so this compounding effect has not been addressed.

The effectiveness of this measure is obviously decreased if the housing placed over 400 metres from the SPA leads to an increased number of new visitors driving as they cannot visit on foot. However, by implementing this in conjunction with other impact avoidance measures, such as car park management and the provision of attractive alternatives within walking distance, this modal shift is likely to be overcome.

#### **23.4 Timescale of implementation**

The 400 metre zone can be afforded some weight as part of the Submission Core Strategy DPD (November 2006). However, full weight cannot be given until following the Examination in July 2007 and the subsequent adoption of the Core Strategy DPD in December 2007.

#### **23.5 Evidence of how the measures will be monitored**

Within the AMR, a report of the development proposals occurring within the 400 metre zone will be documented.

## **24 Education**

#### **24.1 Rationale**

The implementation of awareness-raising and education of the public with regard to biodiversity issues is widely recognised as having a positive impact, although there is little evidence quantifying the extent of this effectiveness. To illustrate, following the publication of the UK Biodiversity Action Plan, a Biodiversity Steering Group was established to advise the Government on implementation and they outlined over 80 proposals to increase public awareness and foster education and training in biodiversity. This includes targets for Natural England to use communications and publicity tools to promote the conservation of heathland, specifically using the nightjar. The England Biodiversity Strategy includes several objectives relating to education, one specifically being “To raise public awareness of and promote positive attitudes towards biodiversity”, which has increased in the past 10 years. The indicator shows that concern about loss of wildlife and willingness to pay for conservation have increased over the past decade. In addition one of the Wildlife Trusts two key aims is to develop greater public understanding, appreciation and enjoyment of wildlife, recognising the important role this has to play in conserving wildlife.

#### **24.2 How measure will be secured and implemented**

There are clear opportunities to develop interpretative facilities, especially in relation to the protected species, which can encourage and foster a greater understanding and appreciation of the importance and sensitive nature of the site. The provision of low-key, but high profile information and interpretation will be an essential tool in guiding the public away from sensitive areas and gaining their support for conservation work.

An awareness raising plan will be prepared for the entrances to the SPA, over which the Borough Council has control. This is likely to include the following measures:

- Signs and information boards at various entrance points.
- Widely available nature trail/information leaflet available at the Look Out Discovery Centre, emphasising the wildlife conservation value of the site, the sensitivity of the bird populations and an explanation of how these issues could be prevented.

- Provide and distribute information for local schools and community groups, including an education resource pack linked to National Curriculum.
- Provide additional information on enhanced alternative areas of open space alongside literature on the SPA.
- Part of the strategy is likely to include a warden / ranger on site to deter harmful behaviour and educate SPA users.

### **24.3 Scale and effectiveness (including degree of confidence of likely success)**

A recent survey showed that 41% of visitors to the SPA were not aware that the site was designated as an area of wildlife importance (Bracknell Forest Borough Council, 2006a), therefore had no knowledge of the potential impact that their recreational activities could have on the protected species of birds. Although education can be considered a 'soft' approach to avoiding effects, and as a result is difficult to quantify, with this considerable lack of knowledge within the population there is potential for an effective avoidance measure.

In addition, education strategies have been shown to reduce harmful behaviour, such as fire setting and fly tipping. Education can also inform people of their alternative open space.

If interpretative information can make even 1% of the visitors act more responsibly by keeping their dogs on the lead and sticking to the path, this could avoid the effects of **1,400 visits**. This is a very conservative estimation, but as there is little research quantifying the precise level of impact of such awareness raising schemes a very low level of effectiveness has been assumed.

### **24.4 Timescale of implementation**

An education strategy will be drawn up to include the elements above.

This will be a 5 year strategy of measures, which will then be reviewed to monitor its effectiveness, and changes made as appropriate.

### **24.5 Evidence of how the measures will be monitored**

A regular visitor survey on the component of the SPA accessed mainly by Bracknell Forest Borough Council residents will ascertain whether the education strategy is raising awareness of the wildlife value of the site, and whether visitor's behaviour has changed as a result.

The incidences of fires and vandalism on the SPA will also be monitored.

## **25 Loss of supporting habitats and lay-back land**

### **25.1 Rationale**

Foraging habitat outside the SPA boundary is important in maintaining bird populations, especially because of the fragmented nature of the SPA. Suitable feeding habitats may change over time, therefore identifying and



mapping sensitive areas surrounding the SPA is not the most appropriate methodology.

In addition, grazing is crucial to maintain the SPA in favourable condition, therefore the provision of 'lay-back' land in the vicinity facilitates grazing persistence by providing easily accessible areas of livestock during parts of the year when grazing on the SPA would cause damage. Therefore land outside the SPA should also be appraised for its value in relation to grazing livestock.

The following policies in the Core Strategy will give some protection to the type of area which is likely to be a sensitive habitat by ensuring development mainly occurs in existing built up areas:

Policy CS1 – Sustainable Principles sets out the importance of making efficient use of land, not coalescing settlements and enhancing natural resources and local landscapes.

Policy CS2 – Location Principles identifies that priority will be given to development within the urban area, then to urban extensions to the Bracknell area.

Policy CS9 – Development on Land outside Settlements will not permit development between Crowthorne and Bracknell, Sandhurst and Crowthorne and Sandhurst and Yateley (amongst other areas).

However, in addition to these policies an assessment should be made of any greenfield sites put forward for development within 400 metres of the SPA boundary.

## **25.2 How measure will be secured and implemented**

Policy CS14 – The Thames Basin Heaths SPA includes the following text:

*“Where a proposed development site lies within 400 metres of the SPA boundary, and is on a previously undeveloped site, the developer must provide an ecological assessment of the potential for the land to provide a suitable feeding habitat for nightjar or lay-back grazing for cattle. If, in consultation with Natural England, the Council believes this to be a valuable habitat in maintaining nightjar population development will only be permitted if the same habitat can be re-created elsewhere.”*

## **25.3 Scale and effectiveness (including degree of confidence of likely success)**

Development is not likely to come forward in areas of feeding habitat or lay-back land within the policy framework of CS1, CS2 and CS9 detailed above. However, to fully ensure this valuable supporting habitat is not lost the additional policy wording will guarantee no net loss of feeding habitat.

This cannot prevent the loss of habitat by natural processes or practices which do not need planning permission (e.g. a change in agricultural practices), but these issues are out of the scope of the Core Strategy.



#### 25.4 Timescale of implementation

Policy CS14 includes information on the protection of feeding habitat and lay-back land. This can be afforded some weight as part of the Submission Core Strategy DPD (November 2006). However, full weight cannot be given until following the Examination in July 2007 and the subsequent adoption of the Core Strategy DPD in December 2007.

#### 25.5 Evidence of how the measures will be monitored

The number of planning applications approved which lead to the net loss in area of nightjar feeding habitat.

Outcome indicator: Nightjar populations.

## 26 Restrictions on pet ownership

### 26.1 Rationale

A body of research has shown that dogs can cause considerable harm to the ground-nesting birds for which the SPA is designated.

Therefore the use of pet restrictions as part of a package of measures has been the subject of much discussion by individual planning applications.

A review of local appeal decisions found several Inspectors have recognised that pet restrictions can be a material consideration and will help avoid this specific impact on the SPA. Some examples have been presented below:

- The appeal APP/T0355/A/04/1170650 (Derryville, Burleigh Lane, Ascot) stated that because of the type of housing proposed (2 bedroom flats), the future management and likely peer control, a restrictive covenant would be effective.
- The Inspector for APP/R0335/A/05/1189309 (Lane House, Goughs Lane, Warfield) accepted that flat owners are less likely to own pets and a covenant could underpin that tendency, although this would not avoid other pressures on the SPA, such as walking and jogging.
- Appeal APP/T0355/A/04/1194980 (Red Gables, George's Lane, Ascot) also accepted that a covenant requiring all transfers and leases to prohibit predatory animals (including dogs) could be enforceable by a management company and address Natural England's concerns that an increase in dog walkers could harm the SPA. The Inspector also notes that this approach would not address the harmful impacts from other pressures on the SPA, such as walking and jogging. The Inspector went on to state that for non-flatted development a 'no-pet' policy could be seen as unreasonable and inappropriate.
- Appeal statement APP/P1750/A/06/2009858 (17-19 Reading Road, Farnborough) reiterates that the offer of a restriction on pets is a material consideration which needs to be considered alongside other factors.

- The issue of pet restrictions is looked at in more depth in APP/T0355/A/05/1180162 (Calleva Cottage, St Marys Road, Ascot) where the Inspector agrees that a restrictive covenant on prohibiting residents of the proposed housing from keeping dogs would probably be effective in the vast majority of cases. The enforceability of such covenants is highlighted as an issue, although in this case the Inspector considers that the existence of a management company, along with monitoring by other residents under the same restrictions (i.e. self-enforcement), would enable this to be effectively implemented. Again, the matter of other recreational issues is raised, which emphasises the point that pet restrictions are not capable of avoiding all adverse effects.
- The requirement for a suitable housing type to ensure enforceability is again raised in appeal APP/R0335/A/05/1191504 (Dandon, Beehive Road, Binfield) where a Grampian type planning condition to prevent the potential occupiers from keeping cats and dogs was deemed to be unsuitable. The Inspector felt that, having regard to the advice in Circular 11/95 *The Use of Conditions in Planning Permissions*, and to the type of housing proposed for this scheme (9 houses) the enforceability of the condition must be in doubt.

Natural England has stated in various appeal statements and letters that,  
*“...in principle, a prohibition on the keeping of dogs in dwellings near the SPA has the potential to provide a mitigation measure. However, it is difficult to see how such restrictions, implemented either by a planning condition or Section 106 Planning Obligation, can be effectively applied.”*

**Therefore, the conclusion drawn from this review is that a covenant requiring all transfers and leases to prohibit the ownership of all breeds of dogs can have an important role to play as part of a wider package of avoidance measures. This cannot be relied upon as avoidance measures on its own, because it do nothing to reduce the effects of people using the heaths for recreation; also this measure is not likely to be enforceable in all housing stock - flatted developments with a management company or sheltered housing developments are examples of where this could be enforced with a degree of certainty.**

A visitor survey of SPA users, carried out by Bracknell Forest Borough Council in August 2005, found that of 20 flat-dwelling residents, 2 of them owned a dog (10%) compared to 88 out of 234 house-dwelling residents (38%). Although these figures are not statistically representative, due to a small sample size, this does offer support to the principle that flat-dwellers do contribute to dog ownership levels, albeit at a reduced level. This is supported by MORI research at Bourley and Long Valley Heath (quoted in *English Nature*, 2006) which found that 79% of visits to the heath by people living in houses were for the purpose of dog walking, compared to 51% of those living in a flat.

## **26.2 How measure will be secured and implemented**

For schemes where this is deemed to be an enforceable avoidance measure, a planning condition and/or legal obligation will be imposed which precludes

dogs in residential units. This will require inclusion of this restriction in the leasehold agreement signed by tenants and purchasers, and will form a legally binding contract preventing dog ownership. This will be enforced and monitored by the freeholder and it is a statutory responsibility of the Local Planning Authority to seek to enforce the planning conditions and/or obligations. This monitoring will be carried out by surveys on pet ownership to ensure the condition is upheld. A survey will be carried out one year after occupation, with an appropriate enforcement approach implemented according to the results of the survey.

To illustrate, a section 106 agreement will include the following condition:

*“Restrictions on keeping of dogs*

*All transfers or leases of new residential units constructed pursuant to the planning permission shall contain a covenant not to keep any dog within the premises.*

*No dogs shall be kept within any new residential units constructed pursuant to the planning permission.”*

In order to enforce and monitor this, the following text could be added:

*“On the first anniversary of first occupation of any dwelling constructed by the carrying out of any part of the development by the developer and each anniversary thereafter the developers shall procure the carrying out of a survey to establish whether any dogs are kept within such dwellings and, if so how many and within which dwellings. Such survey shall be submitted to the Council with 28 days of the relevant anniversary. This will be for a period of 5 years from the completion of the first annual survey.”*

*In the event of the developer failing to submit a survey the Council may commission its own survey and the developer shall promptly reimburse the Council’s reasonable costs of commissioning the survey following a service of notice upon the developer specifying the amount of those costs.”*

There will be an exception to pet restrictions for registered Guide Dogs or Assistance Dogs.

This measure is not intended to be used as an alternative to other measures in the Strategy and should be implemented in addition to the other measures, without being used to off-set any other effects, such as those arising from recreation without dogs.

### **26.3 Scale and effectiveness (including degree of confidence of likely success)**

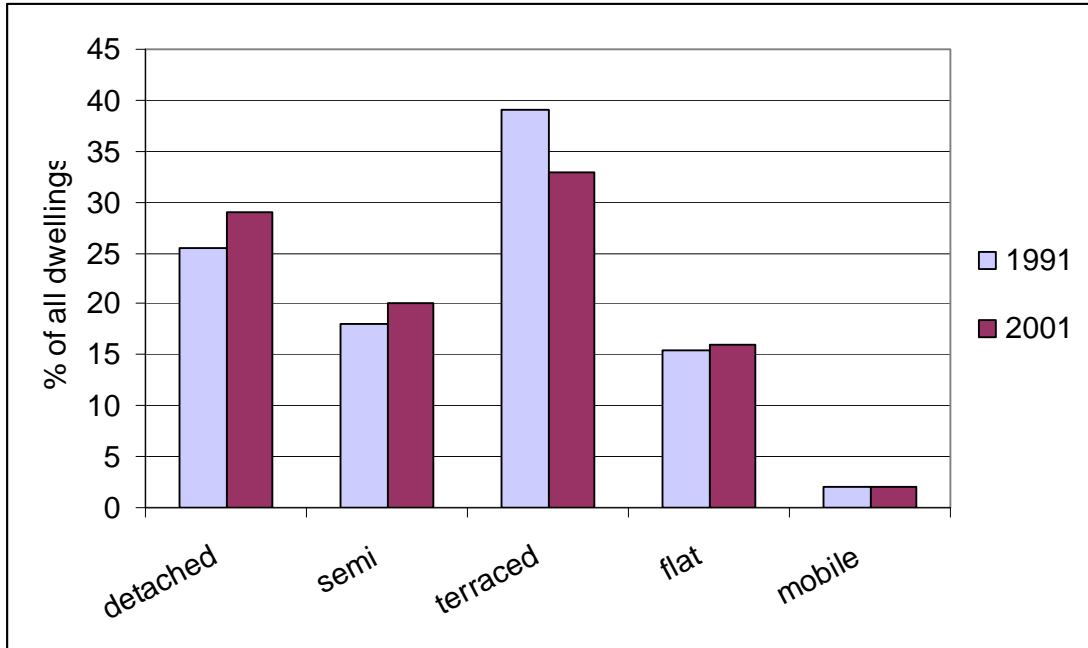
The extent to which this measure can be enforced is dependant upon individual circumstances. As mentioned previously if this is to be effective in the long-term it can only reasonably be applied to the following dwellings:

- Flats where there is a management company, housing association etc able to take on the responsibility for enforcing the restriction.
- Sheltered housing.

- Retirement or care homes.

Figure 6 below shows that between 1991 and 2001 the proportion of flats built within the Borough has increased slightly to 16%. This is likely to have increased further due to the type of planning applications which have been approved over the past 5 years, however in the absence of precise figures a precautionary approach dictates the figure of 16% is used.

**Figure 5. Proportion of dwelling by type**



Source: Census 1991 LBS Table 59 and Census 2001 Table KS16

This would suggest that of the predicted visits arising from the new properties, 16% will arise from residents living in flats. This is also an over-estimation as the population arising from flats is likely to be, on average, lower than that arising from the equivalent housing. However, in the absence of supporting evidence to this effect, again a precautionary approach has been taken.

Therefore, of the total 145,300 additional visits arising from the plans, 16% of these (23,248) are a result of flat-dwellers. If we use the figures from Bracknell Forest’s research, one tenth of these visits are as a result of dog walkers, which is the equivalent of an estimated 2,300 visits (rounded down).

Therefore, if pet restrictions are implemented on flatted developments this will **avoid 2,300 visits to the SPA.**

#### 26.4 Timescale of implementation

A strategic policy, which requires relevant developments to include covenants to restrict dog ownership, will be included in the Limiting the Impact of Development SPD. At present the Examination for the Core Strategy is

timetabled for May/June 2007, following which time this policy will have full weighting and be a material consideration in planning applications.

#### **26.5 Evidence of how the measures will be monitored**

This information is provided in the previous section.

## **27 Bespoke Solution**

The avoidance and mitigation measures discussed throughout the document do not preclude any sites coming forward with their own bespoke measures to remove the significant, adverse effect. These applications will be dealt with on a case-by-case basis following guidelines on Appropriate Assessment and in consultation with Natural England.

## 28 Summary of avoidance and mitigation measures

Table 17 below provides a summary of the impact avoidance measures proposed, and the associated reduction in the impact on the number of visits per annum to the SPA. Without these measures there are a predicted **145,300 additional visits** likely to arise from the plans.

The first measures (strategic sites and open space) are the most effective and deliverable types of avoidance measure; these are therefore the primary measures upon which this plan relies. The secondary measures are no less effective, but their certainty and deliverability is less at this current time, so at this stage cannot be granted as much weight as the primary measures. Through future monitoring the true effectiveness of the secondary measures will be known.

**Table 17. Summary of avoidance and mitigation measures**

Measure	Prevented number of visitors	Estimated prevented number of visits per annum (visitors x 7.81 [see table 8])
<b>Primary measures</b>		
Strategic Sites	2,925 x 2.31 <sup>20</sup> = 6,750 (rounded)	52,800
Open Space	9,080	70,900
<b>Total</b>	<b>15,830</b>	<b>123,700</b>
<b>Secondary measures</b>		
Visitor Access Management (parking)		19,900
Visitor Access Management (e.g. dogs on leads)		27,500
400m zone		9,100
Education		1,400
Loss of supporting habitats		Not applicable
Pet restrictions		2,300
Bespoke solutions		Unknown
<b>Total</b>		<b>60,200</b>

These figures have been totalled in order to give the indicative sum of visits per annum for both primary and secondary measures which could be prevented by the implementation of these measures. An overall total has not been calculated as the primary and secondary measures are not comparable due to the difference in weighting between them.

A limitation of this approach is there is likely to be considerable overlap between these measures as a result of double-counting. To illustrate, a visit

<sup>20</sup> The average 'persons per dwelling' figure from Table 7 (page 24) is used here.

counted as being avoided by enforcing a 'dogs on leads' policy may also be a resident restricted from owning a dog. There is no systematic way of calculating this common ground as there is no data on linkages between each measure.

**In addition, it must be recognised that although the above measures are quantified with specific numbers of visits removed, this approach is not a hard science, and the figures are all subject to an appropriate margin of error as a result of the assumptions made. The calculations have been based on best available evidence and data; however the monitoring and review of these principles in the future will refine the methodology and provide more certainty to and confidence in these figures, and the degree to which they provide a realistic estimation of visits removed.**

## 29 MONITORING

Monitoring the implementation of the strategy will be included within the Annual Monitoring Report (AMR), which guarantees regular assessment of its effectiveness in ensuring new development does not adversely affect the Thames Basin Heaths SPA.

As a result, an appropriate set of indicators will be incorporated into the AMR to accurately determine the effectiveness of the strategy and avoidance and mitigation measures. This will also assist in reviewing the strategy if necessary.

In addition to those listed throughout the strategy, the indicators will cover:

- Visitor usage of the SPA
- Visitor usage of SANGS following on from the baseline data from 2006.
- Incidence of fire setting on SPA to monitor educational strategies. Baseline data required.
- Incidence of fly tipping on SPA to monitor educational strategies. Baseline data required.
- Bird populations.

This monitoring is crucial in providing a method of fine-tuning of the avoidance and mitigation measures to increase their effectiveness and maximise benefits. In addition to the open space mini-plans being produced every 5 years (see page 56) the whole strategy will be reviewed for its effectiveness at least every 3 years or sooner if new evidence emerges or monitoring results indicate a more urgent review is required. The Council is confident that the measures are effective and will deliver the level of mitigation needed to offset the predicted impacts of the plan; however if for some reason specific measures are not found to be working, these will be readdressed.



## STAGE 4: CONCLUSIONS AND CONSULTATION

### 30 CONCLUSIONS

#### 30.1 Integrity Checklist

Natural England has produced internal guidance on determining site integrity<sup>21</sup>. This includes 'A simple, pragmatic checklist for assessing likely effect on integrity', which asks the competent authority to pose a series of five questions as follows:

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**Has the Appropriate Assessment shown:**

- 1. That the area of Annex I habitats (or composite features) will not be reduced?**
  - 2. That there will be no direct effect on the population of the species for which the site was designated or classified?**
  - 3. That there will be no indirect effects on the populations of species for which the site was designated or classified due to loss or degradation of their habitat (quantity/quality)?**
  - 4. That there will be no changes to the composition of the habitats for which the site was designated (eg reduction in species structure, abundance or diversity that comprises the habitat over time)?**
  - 5. That there will be no interruption or degradation of the physical, chemical or biological processes that support habitats and species for which the site was designated or classified?**
- 

The guidance suggests that if the answer to all of these questions is 'Yes' then it is reasonable to conclude that there is not an adverse effect on integrity. If the answer is 'No' to one or more of the questions then further site-specific factors need to be considered in order to reach a decision.

These site-specific factors are listed as follows:-

- Scale of impact
- Long term effects and sustainability
- Duration of impact and recovery/reversibility
- Dynamic systems
- Conflicting feature requirements
- Off-site impacts
- Uncertainty in cause and effect relationships and a precautionary approach.

This process has been used to assess the impact types listed in Table 10 implemented alongside the avoidance and mitigation measures in Table 11 and summarised in Table 17.

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<sup>21</sup> English Nature European Sites Guidance. February 2004. Internal Guidance to decisions on 'site integrity': A framework for provision of advice to competent authorities

**Qualifying interest feature:** Internationally important populations of regularly occurring Annex 1 species.

<b>Has the appropriate assessment shown that:-</b>	
1) The area of Annex I habitats (or composite features) will not be reduced?	Yes
2) There will be no direct effect on the population of the species for which the site was designated or classified?	Yes
3) There will be no indirect effects on the populations of species for which the site was designated or classified due to loss or degradation of their habitat (quantity/quality)?	Yes
4) There will be no changes to the composition of the habitats for which the site was designated (e.g. reduction in species structure, abundance or diversity that comprises the habitat over time)?	Yes
5) That there will be no interruption or degradation of the physical, chemical or biological processes that support habitats and species for which the site was designated or classified?	Yes

An analysis of the effectiveness of the proposed mitigation measures presented in the Avoidance and Mitigation Strategy has led to the conclusion that the policies within the Core Strategy DPD will not result in harm to the integrity of the SPA. Therefore, further analysis of site-specific factors is not necessary.

**30.2 This Appropriate Assessment has confirmed that several policies could have a significant adverse effect on the SPA. However, after taking into account the proposed:**

- **Modifications to policy wording,**
- **Additional policies, and**
- **The avoidance and mitigation measures detailed within Step 4 of the Appropriate Assessment - the SPA Avoidance and Mitigation Strategy,**

**it can be concluded that all potentially significant adverse effects on the SPA arising from these policies, and therefore from the Core Strategy DPD, have been eliminated.**

**Therefore, as detailed in the Figure in Appendix 1 (page 85), compliance with conditions and restrictions can enable it to be ascertained that the proposal would not adversely affect the integrity of the SPA. As a result permission may be granted (or in this case the plan adopted) subject to the conditions or restrictions. Step 4 of the Appropriate Assessment - The SPA Avoidance and Mitigation Strategy sets out how each measure will be implemented and secured to meet these requirements.**

**Consequently, there is no need to proceed to Regulation 49 of the Habitats Regulations, which requires consideration of alternatives or imperative reasons of overriding public interest.**

### 30.3 Residual impacts

It is concluded that in the absence of the proposed measures, there is the potential for the Core Strategy policy CS15 to have an in-combination effect, in addition with the other proposed housing allocations presented in the South East Plan.

However, by implementing the modifications, conditions and restrictions highlighted within this Appropriate Assessment, there are likely to be no residual effects. Natural England have previously stated that if a proposal (or in this case a plan) is likely to have **no effect** on the SPA, it cannot have a significant effect either alone or in combination.

### 30.4 Implementation

Any cost involved in meeting each of the avoidance measures will be covered by financial contributions made by individual developers. A contribution which is relevant to the impact of the proposal will ensure the effects of that specific proposal are not significant, therefore a screening exercise would be able to conclude no likely significant effect and a subsequent Appropriate Assessment at the project level is unnecessary.

The implementation mechanisms identified within Step 3 of this document do not preclude applicants coming forward with their own, alternative avoidance measures. The Council will continue to address applications on a case-by-case basis if a development proposal comes in with its own area of recreational open space or other specific avoidance measures. If it can be agreed, in consultation with Natural England, that the development fully avoids all potential effects upon the SPA the Council can conclude no adverse effect.

## 31 CONSULTATION

- 31.1** This document has been subject to consultation with the public, statutory bodies and other key stakeholders. These include:
- Natural England
  - RSPB
  - Berks, Bucks and Oxon Wildlife Trust
  - Government Office for the South East
  - Council officers, including the Wildlife Ranger and the Parks and Countryside Service
- 31.2** The bodies above were first consulted at the Screening stage, and their comments and input can be found in Table 1 (page 9) with full copies of their comments in Appendix 11 (page 167).
- 31.3** Then, during the production of this document, further consultation was carried out. This was in order to incorporate comments from the statutory bodies at a constructive and effective stage. A workshop was held on Friday 4 August 2006, with the above statutory bodies in attendance, and the consultation comments arising from this can be found in Appendix 11 (page 167). Table 18 below summarises the comments.

**Table 18. Summary of interim consultation comments**

Organisation	Contact	Response
Natural England	Samantha King	Attendance at workshop but no written response.
Royal Society for the Protection of Birds	Colin Wilkinson	Unable to attend workshop but provided written comments. The letter and Bracknell Forest Borough Council's response can be found in Appendix 11 (page 167).
Berks Bucks & Oxon Wildlife Trust	Ellie Seaborne / Allison Hubert	Attendance at workshop followed up by written comments, which have mainly been incorporated into this document.
Wildlife Ranger	John Wenman	Attendance at workshop but no written response.
Parks and Countryside Service	Richard Walton / James Dymond	Separate consultation and written comments.
Government Office of the South East	Leslie Creedon / Susan Barnes	Attendance at workshop but no verbal or written response.

- 31.4** Following this interim consultation, a consultation draft was produced and distributed to key stakeholders for comment on 6 September 2006, with a deadline for comments of 2 October 2006 (4 weeks). In addition to a written strategy, stakeholders were invited to a workshop on the consultation draft in order to help develop comments and discuss the document.

- 31.5** In particular stakeholders were asked for comments on:
- The identification of potential adverse effects - if the document provides a comprehensive list.
  - The ecological sensitivity of the identified areas of mitigation open space and their ability to absorb additional visitors given any nature conservation values.
- 31.6** Relevant comments received by the deadline of 2 October 2006 were incorporated into the Submission version of the document (October 2006). A summary of responses can be found in Table 19 and the formal consultation responses can be found in Appendix 11 (page 167). These are shown with the Council's response and there is an indication of how the document was amended accordingly.

**Table 19. Summary of final consultation comments**

Organisation	Contact	Response
Natural England	Samantha King	Unable to attend workshop. Written response on 5 October.
Royal Society for the Protection of Birds	Colin Wilkinson	Attendance at workshop and provided written comments on 2 October.
Berks Bucks & Oxon Wildlife Trust	Ellie Seaborne / Allison Hubert	Attendance at workshop followed up by written comments on 5 October.
Parks and Countryside Service	Richard Walton / James Dymond	Separate consultation and written comments.

- 31.7** The Technical Background Document - Submission (October 2006) was then subject to public consultation throughout November and December 2006 as a background document to the Submission Core Strategy DPD. Relevant comments arising from this public consultation have been incorporated into this revised document.
- 31.8** Since the Submission version was produced (October 2006) there has been ongoing consultation with Natural England and they have submitted representations through several letters:
- 21 December 2006 - Bracknell Forest Borough Council - LDF Consultation on Core Strategy Submission Draft
  - 28 December 2006 - Bracknell Forest Borough Council - LDF Consultation on Bracknell Forest Core Strategy
  - 9 January 2007 - Comments from Natural England on the Bracknell Forest Limiting the Impact of Development SPD - Consultation Draft November 2006
  - 12 January 2007 - Additional comments on the TBH SPA Technical Background Document to the Core Strategy DPD
  - 16 January 2007 - Thames Basin Heaths SPA Technical Background to the Core Strategy DPD
- 31.9** As a result, a Statement of Common Ground (April 2007) was produced between Bracknell Forest Borough Council and Natural England to set out amendments which have subsequently been made to this Technical Background Document. This enabled Natural England to agree with the

document and remove their objection to Policy CS14 within the Core Strategy DPD. The letters and relevant excerpts of the Statement of Common Ground are provided in Appendix 11 (page 167).

- 31.10** In addition, an independent ecologist, Jonathan Cox of Jonathan Cox Associates, reviewed the document in order to: verify ecological aspects of the report and confirm that all the potential adverse effects have been identified; give a professional opinion on the impact avoidance measures proposed and their effectiveness in removing the adverse impacts; ensure correct process and procedure has been followed throughout. His general comment was, *“The general impression of the report is that it has been well researched, considers the issues in a well structured and clear way and deals progressively with the various tests required by the Habitats Regulations and published Guidance in PPS 9 and other documents.”*

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## 33 GLOSSARY

**Annex I birds:** Species of birds listed on Annex 1 of the Council Directive of 2/4/79 on the conservation of wild birds (79/409/EEC)

**Biodiversity:** Biological diversity or biodiversity is the living component of the natural world and embraces all plant and animal species and communities associated with terrestrial aquatic and marine habitats. Wildlife conservation generally aims to maintain and enhance natural biodiversity.

**Biodiversity Action Plan:** A framework for achieving the conservation of biodiversity based on the targeting resources towards priority habitats and species. BAPs also provide a means for the involvement in conservation of a wide range of organisations and members of local communities. BAPs are prepared at a range of levels: e.g. the UK BAP, which was published in 1994, and the Bracknell Forest BAP.

**Conservation objective:** A stated aim for the conservation of a habitat that may also relate to the conservation of associated species.

**CROW Act:** CROW Act - The Countryside and Rights of Way Act (2000). New legislation that contains new provisions for access in the countryside and for protection of Sites of Special Scientific Interest (SSSIs).

**Designated sites:** Sites which are statutorily designated: SSSIs, SPA, SAC, Ramsar.

**EC Directive:** A type of legislation issued by the European Union which is binding on Member States in terms of the results to be achieved but which leaves them to choose the methods of obtaining those results.

**Favourable condition:** Referring to the condition of habitats within SSSIs where conservation objectives are being met.

**Habitat:** The natural home of any plant, and where animals feed, breed and rest. Often used in the wider sense, referring to major assemblages of plants and animals found together such as woodlands or grasslands.

**Habitats Regulations:** The legal instrument that translates the obligations of the European Directives into UK law. Plans or projects, including planning applications, that may adversely affect a European Site must pass a series of tests under the Habitats Regulations before they can proceed.

**Natura 2000:** Created under Habitats and Species Directive, which encompasses both the SPA and SAC designations.

**Precautionary Approach:** Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation

**SANGS:** Suitable Accessible Natural Greenspace – land that is accessible for public recreation and meets the requirements of visitors who would use the SPA.

**Site of Special Scientific Interest (SSSI):** An area of land or water notified by statutory conservation agency under the Wildlife and Countryside Act 1981 as being of national importance for nature or geological conservation.

**SPA:** Special Protection Area - Statutory protected habitats for wild birds under EC Regulations.