

Appropriate Assessment of allocations within the Hart District Local Plan First Alteration

A Report to Hart District Council



Nightjar *Caprimulgus europaeus*

March 2006

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1. Executive summary

The heathlands of the Thames Basin span the three counties of Surrey, Berkshire and Hampshire. These are of international importance to nature conservation. Much of this heathland has been notified by English Nature as Sites of Special Scientific Interest (SSSI) and collectively they form the Thames Basin Heaths (SPA), classified in accordance with the EU Birds Directive. Sites classified as SPA form a European wide network sites of international nature conservation importance called Natura 2000. Natura 2000 sites are subject to the provisions of the EU Habitats Directive. The UK has transposed the requirements of the EU Habitats Directive into the Habitats Regulations (1994). The Regulations refer to Natura 2000 sites as 'European sites'.

The Habitats Regulations require competent authorities to submit plans or projects that are likely to have a significant effect on European sites to an appropriate assessment. This is needed to assess the implications of the development on the ecological integrity of the European Sites affected.

Following discussion with English Nature, one of the proposals for housing development within the Hart District Local Plan First Alteration has been identified as being likely to have a significant effect upon the SPA, either alone or in combination with other plans or projects, or indeed other housing developments that have been completed over the past decade and which are having a cumulative impact upon the SPA.

The development site identified as being likely to have a significant effect on the SPA is at Dilly Lane, Hartley Wintney.

Development of at this site would result in the construction of an estimated 170 dwellings.

The Dilly Lane site is some 1,500m to the south of Hazely Common SSSI which forms part of the Thames Basin Heaths SPA. Bramshill SSSI is some 2.7km to the north of Dilly Lane and the Castle Bottom to Yateley and Hawley Commons SSSI is some 3.7km from Dilly Lane. All three SSSI are components of the SPA and make a significant contribution to the important populations of rare and threatened bird species listed on Annex I of the Birds Directive for which the SPA has been classified.

Odiham Common SSSI and Hook Common and Bartley Heath SSSI are 2km and 3.3km from the Dilly Lane site to the south and south west respectively. These SSSI are not included in the SPA.

Housing development has been shown to have a number of significant effects on the nature conservation value of heathland and the bird populations it can support. These include:-

- General disturbance including erosion and trampling of heathland
- Predation and disturbance from domestic cats and dogs
- Increased risk of fire
- Introduction of non-native (alien) plant species
- Encroachment of gardens onto the heathland
- Loss of supporting habitat that helps sustain Annex I bird populations outside of the SPA
- Implications for the future management of the heathland for conservation through the re-introduction of extensive stock grazing

Upon investigation, several of these potential impacts were considered unlikely to occur or to be insignificant in relation to the housing development proposed at Dilly Lane. However, the impacts of disturbance from increased levels of public access and in particular dog walking from this development is considered important. This impact will be focussed by and emanate from the car parks around the SPA boundary, in particular those parts of the SPA, such as Hazeley Heath, Bramshill and Castle Bottom to Yateley Common which have public access. Whereas this impact

may not have an adverse effect on the SPA when assessed alone, when considered in combination with other development schemes proposed around the SPA such a conclusion cannot be reached.

Measures have been proposed by the prospective developer of the Dilly Lane site to mitigate or otherwise offset the identified impacts upon the SPA, These have the dual objectives of encouraging recreational use and dog walking on sites outside the SPA and discouraging access to the SPA. The following mitigation measures are proposed:-

- 1 Provision of 5.78ha of alternative green-space for informal recreation adjacent to the Dilly Lane development site.
- 2 Provide information packs to new occupants of dwellings at Dilly Lane providing guidance to recreational to recreational green-space in the vicinity and the sensitivity of the SPA to recreational disturbance – especially during the bird nesting season.

In addition to these proposals it is recommended that further mitigation is required to provide the following:-

- 3 A mechanism to ensure continued provision of information to occupants of new dwellings concerning the sensitivity of the SPA.
- 4 Strategic measures to safeguard the SPA from recreation impacts that may arise from new housing development in the District, of which that at Dilly Lane is a component. These are required to:-
 - facilitate the preparation of access management plans for components of the SPA within Hart District,
 - improve management of the SPA to maintain or restore it to favourable condition to enable it to support the populations of Annex I birds for which it has been classified.

Implementation of a mitigation package comprising these elements would reduce recreational impacts and avoid adverse effects on the integrity of the SPA. However, it would be necessary for Hart District Council to undertake a further assessment of any planning application that might be submitted for the development of housing at Dilly Lane to ensure that the necessary mitigation measures can be delivered and sustained in the long-term.

2. Introduction

This report has been commissioned by Hart District Council to consider the potential impacts of changes proposed within the Hart District Local Plan First Alteration (The First Alterations to the Hart District Local Plan (Replacement) 1996 – 2006) for the Thames Basin Heaths Special Protection Area (SPA).

On 20 October 2005, the European Court of Justice (ECJ) ruled that the United Kingdom had failed to transpose the provisions of Article 6 (3) and (4) of the Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) into UK Law in case C-06-/04 (Commission v United Kingdom). The Court found that, as a result of the failure to make land-use plans¹ subject to Appropriate Assessment (AA) of their implications for European Sites², Article 6(3) and (4) of the Habitats Directive has not been transposed completely.

The necessary amendments will now be made to the UK Conservation (Habitats &c) Regulations, 1994. Public consultation on these is due to commence in April 2006. The aim is to bring the amending Regulations into force on 1 September 2006.

In the interim, the OPDM has advised Chief Planning Officers that:-

'The amending Regulations will not have a transitional provision to cover land-use plans in the course of preparation when they come into force proposed for 1 September 2006. AA will be required for all land-use plans that Regional Planning Bodies (RPBs) or Local Planning Authorities (LPAs) consider likely to have a significant effect on a European Site from this date. RPBs and LPAs are strongly advised to take appropriate action now to prepare for this requirement.'

The Thames Basin Heaths SPA is classified as a European Site in accordance with the EU Birds Directive (79/409/EEC). Taking account of the ECJ ruling and the advice of the ODPM, it is prudent to consider the proposed alternations to policy in the Local Plan in the context of provisions of the Habitats Regulations (1994).

The proposed Alterations affect a total of three policies of the Local Plan namely:-

- i) Policy DEV1 and DEV9 - the allocation of land for housing at Dilly Lane.
- ii) Policies RUR21, URB13 and URB14 – affordable housing policies.
- iii) Policy DEV17 - the allocation for employment (B1 and B2) uses at Clarks Farm, Reading Road, Yateley.

Having considered these policies in consultation with English Nature, it has been concluded that Policy DEV1 and DEV9 affecting the allocation of housing land at Dilly Lane are likely to have a significant effect upon the Thames Basin Heaths SPA.

Policy DEV17 for the allocation of land for employment use at Clarks Farm, Reading Road, Yateley relates to land that is over 500m to the north of the SPA boundary. An area of public open space (Darby Green) separates the employment site from the SPA and the development policy requires the provision of an additional extensive area of greenspace in the Blackwater Valley to the north of the development site. Given these circumstances, it is concluded that this policy is not likely to have a significant effect upon the SPA, either alone or in combination with other plans or projects.

¹ Land-use plans are synonymous with Development plans or plans and refer to Regional Spatial Strategies (RSSs), transitional plans, Development Plan Documents (DPDs) and Supplementary Planning Documents (SPDs) in this letter.

² European Sites consist of Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and sites on draft lists for protection as outlined in Regulation 10 of the Habitats Regulations 1994.

Equally, it has been concluded that the policies for affordable housing (RUR21, URB13 and URB14) are not likely to have a significant effect upon the SPA.

Given that the development policies for Dilly Lane are likely to have a significant effect upon the SPA, it is necessary for Hart District Council, as competent authority, to undertake an appropriate assessment (AA) of this policy in view of the conservation objectives for the SPA. Having undertaken such an assessment and in the absence of alternatives or imperative reasons of overriding public interest, the District Council can only implement this policy after having ascertained that it will not adversely effect the integrity of the SPA. In coming to this conclusion it may take into account the manner in which it is proposed to be carried out or any conditions or restrictions which would accompany any adopted policy.

The Thames Basin Heaths SPA is classified as a European Site in accordance with the EU Birds Directive. The provisions of the Habitats Regulations (1994) therefore apply to plans and projects considered likely to have a significant effect upon the SPA, either alone or in combination with other plans or projects.

The effect of recreational pressure on the conservation status (condition) of the Thames Basin Heaths SPA has become of increasing concern over the last decade. This recreational pressure is largely derived from a growing human population in the region of the SPA as a consequence of continued urban development fuelled by economic growth. This trend looks set to continue as emerging Regional planning policy is expected to identify this region of England for further significant housing development over the next decade.

In response to the growing recreational and other pressures arising from urban development on the Thames Basin Heaths SPA, English Nature is developing an Area Based Delivery Project. This seeks to ensure that any new housing development that could increase recreation pressures on the SPA should be subject to appropriate mitigation to offset these pressures.

This assessment will draw on the guidance emerging from English Nature in the development of the Delivery Project to help assess the likely effect of policies DEV1 and DEV 9 for the allocation of land for housing in Dilly Lane, Hartley Wintney and to identify the need for suitable mitigation to offset and adverse effects on the integrity of the SPA.

It has been assumed that any planning applications arising from the allocation of land for housing in Dilly Lane in the local plan would require a further appropriate assessment (AA). Whereas the assessment of the local plan policies would clearly form the basis for a subsequent appropriate assessment of any planning application, there are likely to be differences in terms of the level of detail considered in the two AA.

3. Legislative background

3.1 The Thames Basin Heaths SPA

The Thames Basin Heaths SPA was classified in March 2005 to conserve populations of three bird species listed on Annex 1 of the EU Birds Directive - nightjar, woodlark and Dartford warbler³. The site is protected by the Conservation (Natural Habitats & c.) Regulations 1994 commonly referred to as the Habitats Regulations. The Habitats Regulations translates the European Communities Directives 79/409/EEC 1979 on the Conservation of Wild Birds and 92/43/EEC on The Conservation of Natural and Semi-Natural Habitats and of Wild Fauna and Flora into UK legislation. These Directives are commonly referred to as the Birds Directive and Habitats Directive respectively.

3.2 The Habitats Regulations

Authorities issuing permissions or authorisations that may affect a site protected by the Habitats Regulations are called competent authorities (or in some cases relevant authorities). Local planning authorities are the competent authorities for planning applications affecting the SPA. It has also been assumed that the local planning authority will be the competent authority in relation to the adoption of the First Alterations to the Local Plan. However, if the decision to adopt or reject the proposed alterations to the Local Plan rests with the in the Inspector appointed by the First Secretary of State, it will be either the Inspector or the First Secretary of State that will assume to role of competent authority.

Regulations 48 to 53 of the Habitats Regulations established a set of procedures for decision making by competent authorities. This stepwise procedure is summarised in a flowchart in Figure 1 taken from Government Circular 06/05⁴. One of the key features is the requirement for assessment of plans or projects 'in-combination' with other plans or projects. This in combination approach to the assessment is designed to assess the effect of a series of small impacts that may, working together, produce a significant impact. In addition, plans already completed may also give rise to continued effects. One obvious example is the continued recreational use of the SPA by residents of completed housing developments. Every development which adds residents close to an accessible site, potentially adds to the background of recreational use (now or in the future) and therefore potentially adds to the cumulative recreational impact.

The European Commission guidance (2000) on Managing Natura 2000 sites makes it clear that cumulative impacts should be considered in application of the Habitats Directive as follows:

"It is important to note that the underlying intention of this combination provision is to take account of cumulative impacts, these will often only occur over time. In that context one can consider plans or projects which are completed; approved but incomplete or those not yet proposed."

The tests listed on Figure 1 include the requirement to conclude no adverse effect upon the integrity of the site. The concept of site integrity has been usefully defined by PPG 9 on Biological Conservation as:-

"The coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is... classified".

³ The site qualifies because it is regularly used by 1% of more often Great Britain population of birds listed on Annex I of the Directive 79/409 on the Conservation of Wild Birds Commonly called the Birds Directive.

⁴ ODPM Circular 06/2005. Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System.

This echoes the definitions of favourable conservation status of habitats and species populations given in article 1 of the Habitats Directive.

It is clear from the legislation and guidance, that competent authorities should be assessing plans or projects with others across the whole SPA and need to take account of cumulative impacts of multiple small developments over time, including background levels of these impacts, in order to avoid or mitigate potential adverse effects on the SPA.

Figure 1: Consideration of development proposals affecting Internationally Designated Nature Conservation Sites

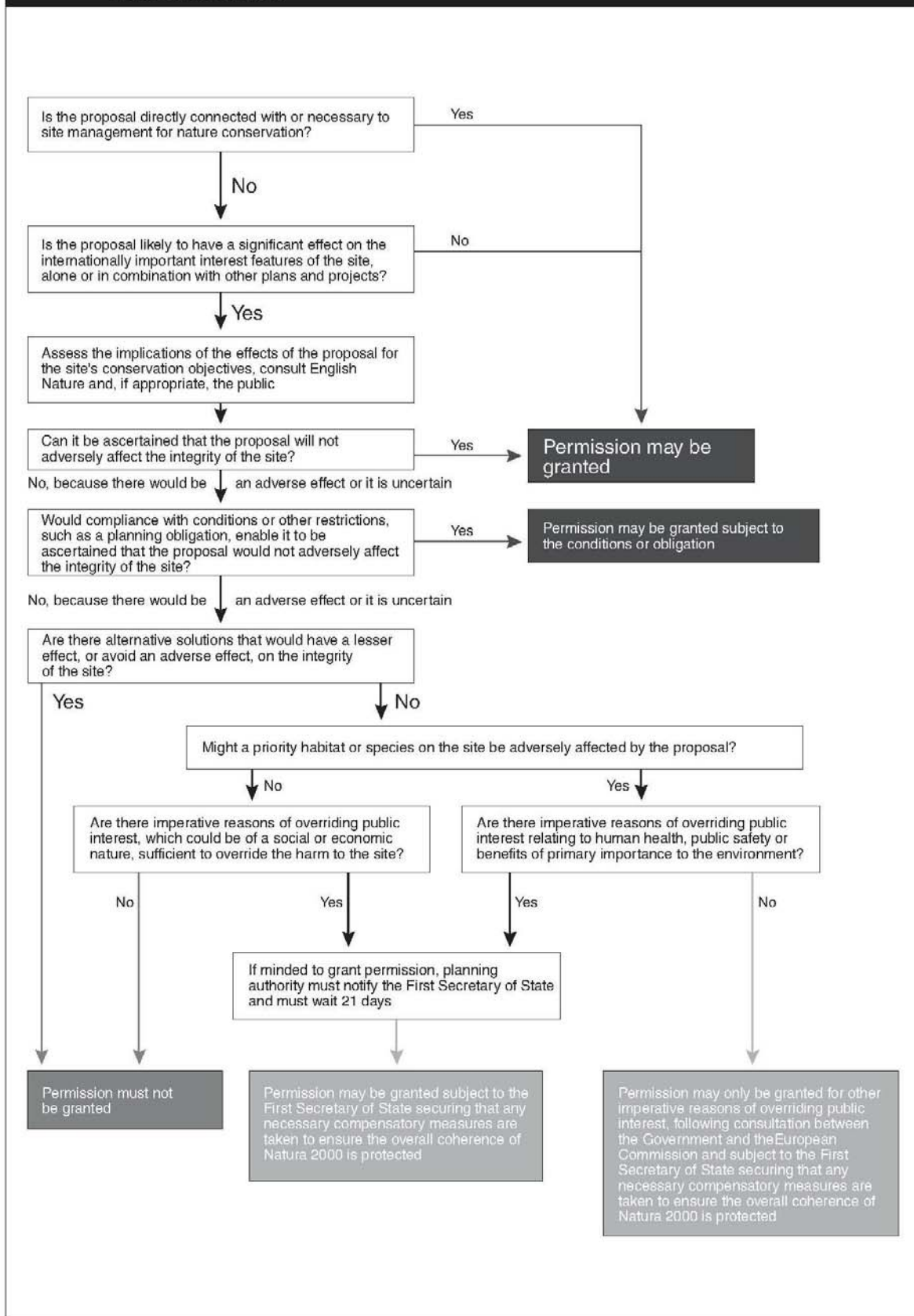


Figure 1

3.3 Definition of plans and projects

There has been some debate over what constitutes a plan or project in terms of the Habitats Directive and the Habitats Regulations. It is important that for the purposes of this assessment a definition of 'plans or projects' is provided.

Guidance from the European Commission has been published in 'Managing Natura 2000 sites; provisions of Article 6 of the Habitats Directive' (EU 2000). In relation to plans it states that:-

Of obvious relevance are land-use plans. Some have direct legal effects for the use of land, others only indirect effects. For instance, regional or geographically extensive spatial plans are often not applied directly but form the basis for more detailed plans or serve as a framework for development consents, which then have legal effects. Both types of land-use plans should be considered covered by Article 6(3) to the extent that they are likely to have relevant significant effects on a Natura 2000 site.

By contrast, earlier advice in the UK published as a footnote to Annex A in PPG 9, states that 'proposed developments' considered in the context of the Habitats Regulations:

'does not include development plans, since the plan itself cannot authorise development that would affect the site'.

However, as mentioned in the introduction to this assessment, the recent ECJ Judgement has made it clear that the PPG 9 interpretation of the Habitats Directive with regard to development plans was defective and it is clear that both development plans and planning applications should be considered as 'plans or projects' in terms the Habitats Regulations.

Revised Regulations are to be published to take account of this change. However, there is also a need for guidance as to how to apply the procedures developed for making appropriate assessments of projects to development plans. This could have implications for how the 'in combination' assessment is undertaken and how detailed or specific mitigation measures to offset adverse impacts need to be.

3.4 Likely significant effect

Before a plan or project can be subject to an appropriate assessment it must first be judged to determine whether it is likely to have a significant effect upon the SPA and/or the cSAC –either alone or in combination with others.

Following discussion with English Nature it was agreed that due to its size, proximity to the European site boundary and considerations of in-combination effect, the proposed housing development at Dilly Lane would be likely to have a significant effect upon the SPA.

However, before determining if an appropriate assessment is required, it is necessary to consider if the proposed development is connected with or necessary for the management of these European sites. Although not specified in the Regulations, guidance in Circular 06/05 makes it clear that the management involved is for nature conservation and might for instance include the construction of water control structures for maintaining the conservation value of a wetland site. In this instance, the proposed housing is clearly not connected with or necessary for the management of the SPA. In such circumstances, an assessment of this housing allocation is required. This assessment must be in view of the site's conservation objectives.

3.5 In combination with other plans or projects

The requirement to consider if a plan or project is likely to have a significant effect upon a European Site 'alone or in combination with other plans or projects' under Regulations 48 (1a) extends also to the appropriate assessment undertaken under Regulation 48 (1b).

Guidance from the EU is also helpful in the definition of plans or projects in combination with others. It states that:-

It is important to note that the underlying intention of this combination provision is to take account of cumulative impacts, and these will often only occur over time. In that context, one can consider plans or projects which are completed; approved but uncompleted; or not yet proposed.

It goes on to add:-

Although already completed plans and projects are excluded from the assessment requirements of Article 6(3), it is important that some account is still taken of such plans and projects in the assessment, if they have continuing effects on the site and point to a pattern of progressive loss of site integrity.

These two points suggest, firstly that the in combination test should take account of cumulative impacts. This requires that plans or projects that form part of a wider trend must be more carefully considered than those which can be assessed in isolation. In this instance, development within Hart District is clearly part of a longer term process of development adjacent to the SPA that may have continuing effects.

To demonstrate this, information has been obtained from Hampshire County Council on housing completion rates between 2000 and 2005 for the Hart District and Rushmoor Borough. These two closely related local authorities border the SPA within Hampshire and have been selected to demonstrate the cumulative impact of housing development affecting this part of the SPA. The results of this analysis are reproduced in figure 2. They show the increasing trend numbers of housing completions over the five years between 2000 and 2005 in both districts with a total of 2287 completions in Hart District over the period and a total of 1103 in Rushmoor Borough.

Taking a wider perspective of the whole SPA, research by Land Use Consultants (LUC, 2005)⁵ has calculated that at least 35,170 houses will need to be built around the Thames Basin Heaths, based on the current housing allocation, to 2016. This area would equate to a loss of 12Km² to housing development at a density of 30 houses per hectare.

The LUC research identifies a number of other impacts on the Thames Basin Heaths SPA that collectively indicate a habitat under significant pressure. These are summarised as:-

Habitat areas

- A 53% (104 km²) reduction in the overall area of heathland within the area between 1904 and 2003;
- A 29% (222 km²) reduction in the overall area of other open land within the area between 1904 and 2003, with some areas of heathland now almost entirely surrounded by development;
- A total of 192 fragmented blocks of heathland in 2003 compared to 52 intact blocks of heathland in 1904;

⁵ Land Use Consultants (2005). *Going, going gone? The cumulative impact of land development on biodiversity in England*. English Research Report 626, Peterborough

- A further allocation of housing and other infrastructure over the next 12 years equivalent to 1,800 hectares of new development which may lead to further isolation of heathland areas and greater pressure along their boundaries.

Quality of habitat

- Exceedance of critical levels of acidity across the whole pSPA as a result of sulphur and nitrogen deposition, even when background levels are considered alone;
- 31% of the pSPA heathlands (25.5 km²) currently adversely affected by nutrient enrichment as a result of nitrogen deposition from aerial pollution (primarily from roads and industry);
- 33% of the SPA heathlands (27 km²) currently affected by noise (from roads) to the extent that bird densities are likely to be reduced;
- 10% of the pSPA heathlands (8.5km²) currently adversely affected by domestic cat predation of ground nesting birds.

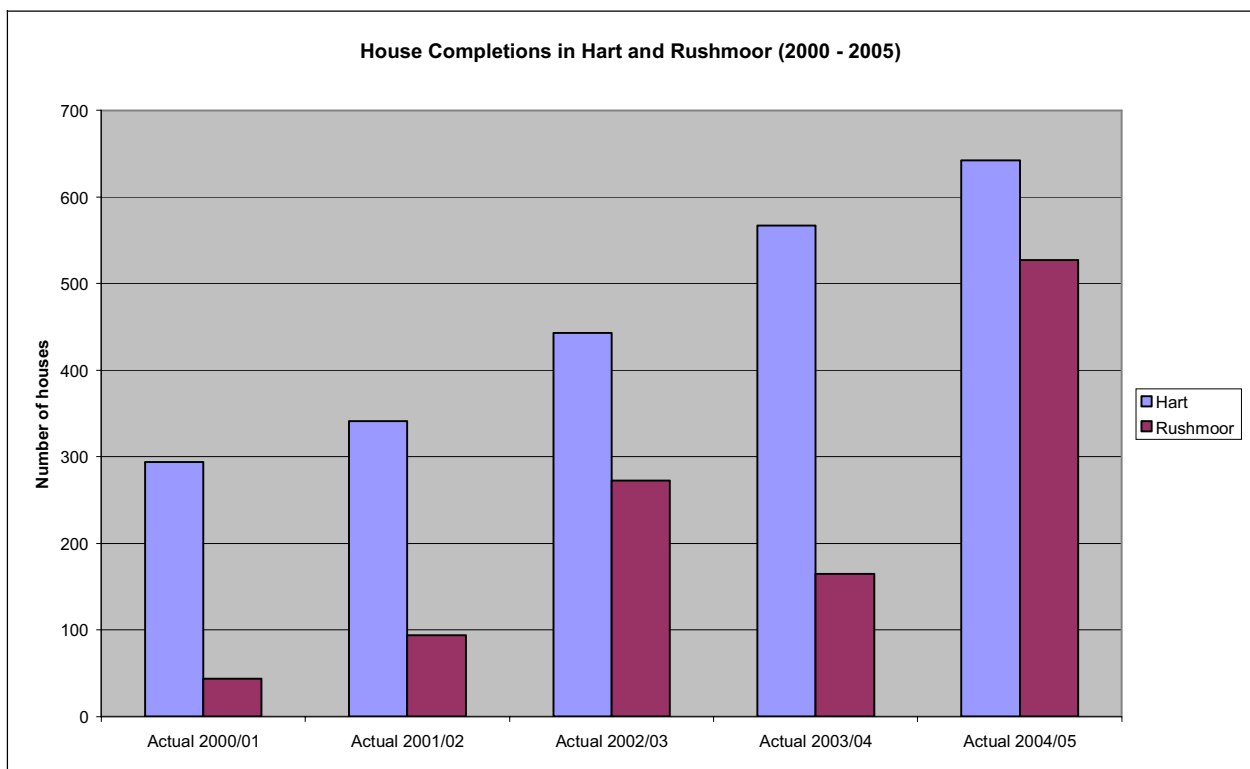


Figure 2: Hart and Rushmoor Housing Completions: 2000 - 2003

It is not possible to make a numerical assessment these cumulative or combined impacts with those likely to arise from the development of the land allocated for housing in Dilly Lane, however, taking the advice from the EU in Managing Natura 2000, it is possible to demonstrate that the SPA is subject to a variety of adverse effects that point to a pattern of progressive loss of site integrity.

3.6 Nature conservation objectives

Having determined that in combination the housing development at Dilly Lane is likely to have a significant effect upon the SPA and is not necessary for the management of the site, it follows that an appropriate assessment is required.

The Regulations require this to be undertaken 'in view of that sites nature conservation objectives'. EU guidance in 'Managing Natura 2000 Sites' suggests that the Conservation Objectives for a site can be defined by reference to the list of Annex I habitats and Annex II species occurring in the site (other than those whose presence is deemed non-significant). However, this definition relates specifically to SAC (designated under the Habitats Directive) and

not to SPA. However, by inference, it would appear logical to define conservation objectives for the SPA relating to the important populations of birds listed on Annex I of the Birds Directive for which the SPA has been classified.

Further discussion on the definition of conservation objectives for the Thames Basin Heaths SPA is provided in section 4.

3.7 Conclusions of an appropriate assessment

Regulation 48(5) gives guidance as to the way in which competent authorities should consider the conclusions of the appropriate assessment and states:

“In the light of the conclusions of the assessment, and subject to Regulation 49 (considerations of overriding public interest) the authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European Site.”

This clause is not defined in the Regulations, and hence some interpretation is necessary. Firstly it should be emphasised that this test is written in the negative, hence the competent authority must ensure that the plan will not adversely affect the integrity of the site. If the conclusion of the assessment is that the plan might or could adversely affect the site’s integrity this is sufficient doubt to fail the test, as in such circumstances it cannot be concluded that the plan will not adversely affect the site’s integrity. The most frequently used definition of site integrity is that given in PPG 9. This defines it 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.”

Although useful, this definition does not in itself provide parameters against which an assessment can be made.

This is assisted by the Habitats Directive. This states that the intention of the Natura 2000 network shall be to:

“enable the natural habitats and species habitats concerned to be maintained or where appropriate restored at a favourable conservation status”.

Favourable conservation status of a species population is defined as:

- *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*

Key phrases in these definitions have been underlined for emphasis. It is clear that many of the parameters which relate to the definitions of favourable conservation status are those used in the widely held definition of site integrity provided by PPG 9. The definitions of favourable conservation status are therefore used as the basis for developing conservation objectives against which an assessment of the identified plans and projects can be assessed.

4. Characteristics of the proposed Dilly Lane site

The land at Dilly Lane, identified in the First Alteration to the Local Plan, is described in the Hart District Council Local Plan (Replacement) 1996 – 2006. The policy for this area is reproduced in Box 1. The site comprises a grass field to the south of Dilly Lane. It slopes to the north and is bounded by mature hedges and woodland belts. Access from the site to the SPA would be via the A30 and B3011 to Hazeley Heath to the north of the site or further east along the A30 to the car parks and lay-bys within Yateley Heath Country Park and the car park on Blackbush Road (see figure 4).

Further extensive areas of recreational green space exist at Hook Common and Bartley Heath to the south west of Hartley Wintney. This Site of Special Scientific Interest is largely owned and managed as a nature reserve by the Hampshire and Isle of Wight Wildlife Trust. It is some 5km to the south of Hartley Wintney along the A30. An equally attractive area of recreational green space is provided by the extensive Odiham Common SSSI. This is a distance of some 3.5km to the south of Dilly Lane on the B3016. Further smaller areas of common land occur at Phoenix Green and West Green to the west of Hartley Wintney. A network of public rights of way radiate from the Dilly Lane development site and link many of these areas of semi-natural green-space. A more complete list of alternative green-space provision in the vicinity of Hartley Wintney is given in table 6.

The locations of the Dilly Lane site in relation to areas of semi-natural open space within 5km are shown in figure 4.

Box 1: Policy DEV 9 for Housing development on land at Dilly Lane

Dilly Lane, Hartley Wintney	
DEV 9	8 HECTARES (19.46 ACRES) OF LAND AT DILLY LANE, HARTLEY WINTNEY IS PROPOSED FOR RESIDENTIAL DEVELOPMENT.
<i>This site is well contained by mature field boundaries, except on the southern edge where planting would be needed to reinforce the boundary. The settlement of Hartley Wintney includes neighbourhood shopping facilities, community facilities and primary schools: the village centre is within 1,100 metres of the site. Secondary schools, leisure facilities and a wider range of shopping facilities are available in the nearby settlements of Fleet, Yateley and Odiham. There is a railway station 1km away at Winchfield: improved pedestrian/cycle access to the station and to the village centre would be essential to serve the new development. Improvements to local bus services to link them to the train timetables may be sought. The carriageway of Dilly Lane does not need to be widened and other necessary improvements can be carried out within highway land without encroaching on common land. Trees on common land bordering Dilly Lane should be fully protected. It is also important that any proposed road improvements do not have a detrimental effect on the nature conservation interest of the surrounding area. Existing common land to the west of the site will be protected and further open space and landscaping provided adjacent to it in order to provide informal open space for residents, create new wildlife habitats and continue the pattern of open, lightly wooded commons within the settlement of Hartley Wintney.</i>	

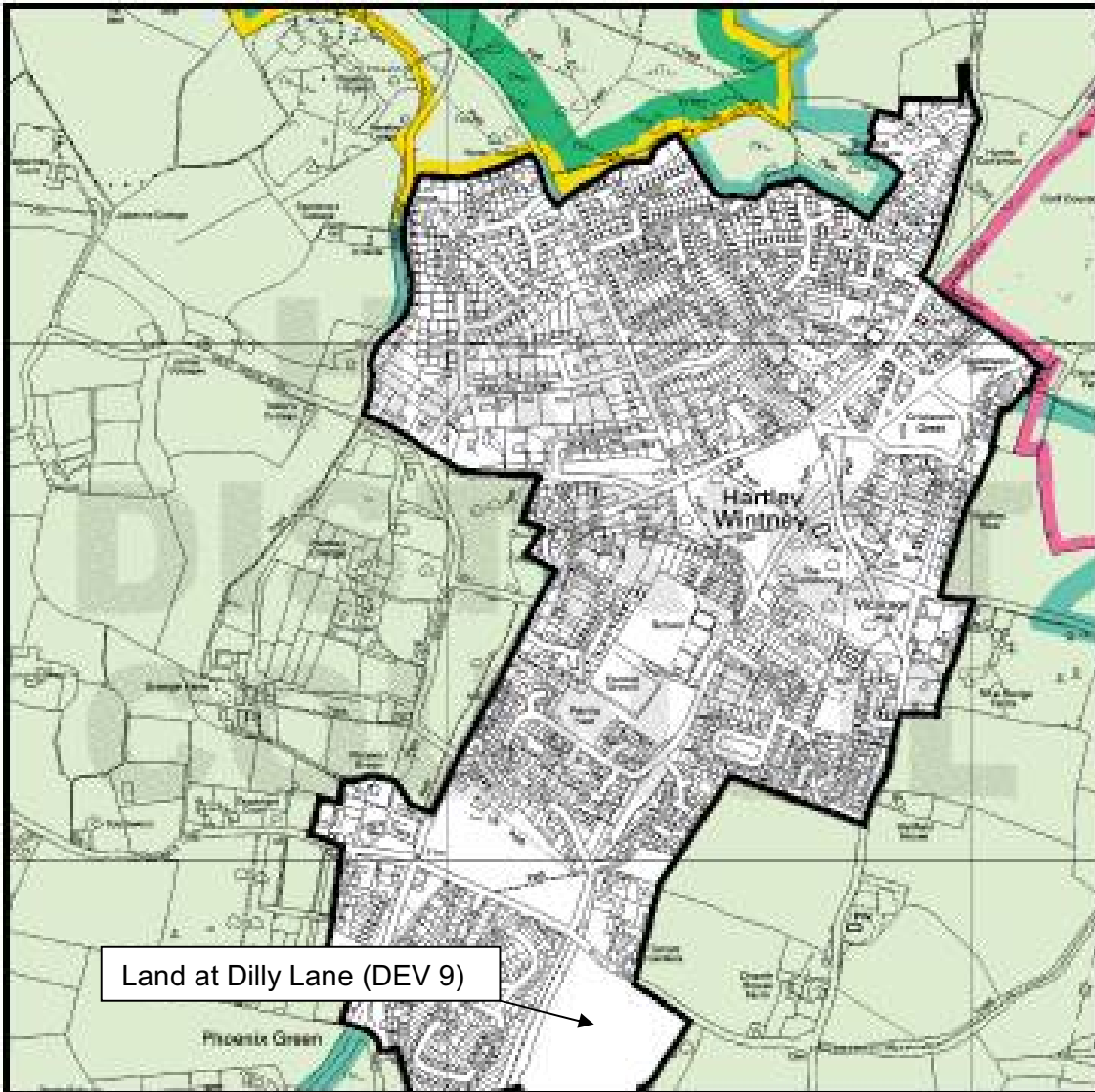


Figure 3: Land allocated for development at Dilly Lane, Hartley Wintney

Applications have been made for the development of the Dilly Lane site that are currently subject to appeal. The most recent application is for a total of 170 dwellings. Taking an estimated average of 2.4 people/dwelling, this equates to some 408 new residents.

5. Nature conservation objectives for the Thames Basin Heaths SPA

5.1 Populations of Annex I birds within the SPA

The Thames Basin Heaths SPA incorporates land within 13 SSSI across the three counties of Hampshire, Berkshire and Surrey. The SPA extends to an area of some 8,274.72 hectares. It meets the qualifying criteria for the classification as a SPA under article 4.1 of the EU Birds Directive (79/409/EEC) by supporting at least 1% of the British population of three bird species listed on Annex 1 of the Directive. These are listed in Table 2.

Table 2: Populations of Annex 1 species within the Thames Basin Heaths SPA*

Annex 1 species	Estimated population in SPA	% of GB population
Dartford warbler	445 pairs (1998/99)	28%
Nightjar	264 males (1998/99)	8%
Woodlark	149 pairs (1997)	10%

* Data from Thames Basin Heaths SPA Citation (English Nature, March 2005).

The numbers of these birds within the three SSSI nearest to Dilly Lane are shown in table 3. Much of this data is now about 8-9 years old and might be considered out of date, given the population increases in most of these species recorded at other heathland sites in southern England over recent years. However, the purpose of this assessment is to consider the impact of housing development on the habitat that is able to support these populations of birds and not the bird populations themselves. These are liable to change from year to year depending on habitat management and vegetation succession as well as weather conditions.

Table 3: Annex I bird populations in SSSI in the vicinity of Hartley Wintney

Site name	Nightjar ¹	Woodlark ²	Dartford warbler ³
Hazeley Heath	4	2	0
Castle Bottom and Yateley Common	22	12	25
Bramshill	15	14	3

Data from Thames Basin Heaths SPA Departmental Brief, English Nature 2000.

¹ = 1997-99. ² = 1997. ³ = 1998-99

5.2 Nature conservation objectives

The overall conservation objective for the SPA has been published by English Nature and is reproduced in box 1.

Box 1: Conservation objective for the Thames Basin Heaths SPA

The Conservation Objective for the European interests on the SSSI are:

To maintain*, in favourable condition, the habitats for the populations of Annex 1 bird species+ of European importance, with particular reference to:

+nightjar, woodlark and Dartford warbler.

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

The term **favourable condition** used in the conservation objective has been developed by the Joint Nature Conservation Committee (JNCC). It describes the status of habitats and species

populations within individual sites and can be equated with that of **favourable conservation status** (used in the Habitats Directive).

Recent guidance from the EU helps simplify the distinction between favourable condition and favourable conservation. It states that:-

'The conservation status of natural habitat types and species present on a site is assessed according to a number of criteria established in article 1 of the directive. This assessment is done both at a site and network level.'

The favourable conservation status of a site can be assessed against the definition of favourable conservation status given in Article 1 of the Directive. In summary, for species populations, such as those for which the SPA has been selected, favourable conservation status occurs 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

Using these definitions, three conservation objectives can be defined against which the impact of the proposed housing development can be assessed.

- | | |
|---------------------|---|
| Objective 1: | Maintain the population of each of the three Annex 1 bird species as a viable component of its natural habitats on a long-term basis. |
| Objective 2: | Maintain the range (geographic extent) of the population of each of the three Annex 1 bird species for the foreseeable future. |
| Objective 3: | Maintain sufficient area of suitable habitat to maintain the populations of each of the three Annex 1 bird species on a long term basis. |

6. Contribution of Castle Bottom to Yateley and Hawley Commons SSSI, Bramshill SSSI and Hazeley Heath SSSI to populations of Annex I birds within the SPA

6.1 Introduction

A detailed description of the Thames Basin Heaths SPA is provided in the Departmental Brief that was submitted by the JNCC to Government to support the classification of the SPA. The following analysis of the SPA is based largely on information provided in this brief, a copy of which is included at appendix 1.

6.2 General description of the SSSI in the vicinity of Hartley Wintney

Two of SSSI in the vicinity of Hartley Wintney were extended prior to the classification of the SPA to include areas of forestry plantation that supported populations of Annex 1 birds. The resulting SSSI comprise a number of sub-sites listed within the SPA Departmental Brief. The following descriptions include a tabulation of the numbers of Annex 1 birds recorded in each of the sub-sites listed in the Departmental Brief.

6.2.1 Castle Bottom to Yateley and Hawley Commons

This extensive SSSI covers an area of some 921 hectares stretching from Hawley Common in the east to Eversley Common in the west. The A30 runs through the length of the SSSI and a large part is owned and managed by Hampshire County Council as Yateley Common Country Park.

The vegetation of the SSSI comprises extensive areas of dry heath grading locally into humid heath or acid grassland and bracken. Common gorse, silver birch and pine scrub form part of the heathland habitat mosaic. The SSSI also contains a valley bog within Castle Bottom where the plateau gravels have been cut through to the underlying Bagshot Beds and Bracklesham Sands. In addition to the open heathland, the SSSI contains some extensive areas of coniferous forestry plantations. The cycle of forestry operations within these parts of the SSSI create a mix of young plantations, broad forest rides and scrub. This mosaic of open heathland, young forestry plantations, forest rides and scrub provides habitat for a number of heathland birds. These include stonechat together with the highly vulnerable species of woodlark, nightjar and Dartford warbler.

Sub-site	Nightjar	Woodlark	Dartford warbler
Eversley Common	4	1	0
Yateley Heath Wood	6	3	2
Castle Bottom to Yateley Common	10	7	19
Hawley Common	2	1	4
SSSI Total	22	12	25

6.2.2 Bramshill

The Bramshill SSSI is immediately adjacent to the Castle Bottom to Yateley and Hawley Commons SSSI. It extends over an area of some 671 ha. and comprises extensive areas of conifer plantation together with a series of shallow acidic ponds within relict heathland. As with the Castle Bottom to Yateley and Hawley Commons SSSI, the management of the pine plantations results in a sequence of clearings and young coniferous trees which are utilised by breeding nightjar, woodlark and Dartford warbler. The site also contains small breeding populations of hobby and little ringed plover.

Sub-site	Nightjar	Woodlark	Dartford warbler
Bramshill	7	7	3
Heath Warren	2	3	0
Warren Heath	6	4	0
SSSI Total	15	14	3

6.2.3 Hazeley Heath

The Hazeley Heath SSSI is a registered common and occupies a ridge of Bracklesham Sands capped with plateau gravels. The open heathland comprises a wide range of heathland vegetation type ranging from dry plant communities on the plateau to humid and wet heath around and below a spring line on the easterly facing slopes of the common. The site also contains some extensive areas of common gorse scrub and young silver birch woodland.

Sub-site	Nightjar	Woodlark	Dartford warbler
Hazeley Heath	4	2	0

6.3 Value of the habitat for Annex 1 Birds

6.3.1 Nightjar *Caprimulgus europaeus*

6.3.1.1 Habitat and ecology

Nightjars are summer visitors, migrating from sub-Saharan Africa to arrive in Britain in May and returning in August and September. Nightjars are nocturnal, roosting in daytime on the ground or sometimes on the low branches of a tree. Their cryptic (camouflaged) coloration helps conceal them from predators at these times.

Birds emerge from their roosts at dusk to display and feed on flying insects, mainly moths. Male nightjars have a highly distinctive night time call consisting of a prolonged purring or churring. This churring sound is used by ornithologists to survey numbers of nightjars within an area, on the assumption that each churring bird represents a single nightjar territory or pair.

Nests are built on the ground in areas that are bare or sparsely vegetated, usually on freely draining soils. Traditionally they have been associated with the light sandy soils of heathlands and other agriculturally unimproved land. As heathland habitat has been lost to development and changes in habitat structure, there has been a shift to nesting in recently felled conifer plantations. In these situations, nightjars nest on the dead debris left by tree felling operations, but will not nest on the growing vegetation which quickly establishes. For this reason, nest sites in conifer plantations are ephemeral in nature and the maintenance of nightjar populations in conifer forests relies upon a constant felling programme to sustain continued nesting habitat. Nightjars tend to nest within a distinctive micro-habitat on heathland sites. This occurs at the edge of open heathland where there is a transition from heath to scrub and woodland. Sites where this transition is punctuated by a series of sheltered bays or woodland edge glades are generally most attractive.

Although the nesting habitat of nightjars is quite specific, the birds feed widely over adjacent areas of heathland, woodland, wetland and other insect rich countryside. Research from Dorset has shown that nightjars can range up to 6 kilometres from their nest territory, with an average range distance of 3.1 km from the nesting territory (Alexander and Cresswell, 1990). This factor means that habitat outside of the SPA may be important for this species and may need to be considered in the context of off-site impacts.

6.3.1.2 National and SPA population

The first national population census of nightjars was in 1981. This was undertaken after the main range contraction and decline in population reported during the 1970s. The 1981 census found a total of 2,100 churring male nightjars in Britain.

A second national census undertaken in 1992 located 3,400 churring males, an overall increase since 1981 suggesting the contraction in the species range had slowed or been stopped. It was also likely that there had been additional colonisation of new conifer forest clearings created by the storms of the late 1980s and early 1990s.

The population of nightjar in the Thames Basin Heaths SPA is estimated at 264 pairs or 7.8% of the British population. An estimated 41 pairs of nightjar nest on the three SSSI near to the Dilly Lane site, approximately 16% of the SPA population.

6.3.2 Woodlark *Lullula arborea*

6.3.2.1 Habitat and ecology

The name woodlark is a misnomer, as it requires only a few scattered trees to act as song posts. It is a species of open heathland landscapes, forestry clearings and tree nurseries. Research has shown that within this general habitat the presence of suitable micro habitat for foraging is the main limiting factor. This is provided by areas of bare ground or short vegetation in which woodlarks can hunt for their insect prey. This is provided by grazed, mown or burnt heathland and grassland vegetation. Research in the New Forest (Burges 1991) has shown that grazed heathland provides the most attractive of these foraging habitats, followed by mown and finally recently burnt vegetation.

Woodlarks on the Hampshire/Surrey border are largely sedentary remaining throughout the year, whilst populations further to the east in Breckland for instance, tend to migrate to warmer areas during the winter.

Woodlarks nest on the ground in areas of tussocky grassland or heathland vegetation. A mosaic of open short vegetation for foraging with associated low vegetation in which to conceal the nest is therefore the preferred habitat of woodlarks.

6.3.2.2 National and SPA population

The national population in 1968-72 was estimated at 200-450 pairs of woodlark. This declined to 160-170 pairs in 1975 but then increased, particularly in the Surrey/Hampshire area after the extensive heath fires experienced during the hot dry summer of 1976. Principally for this reason the national population rose to 400-430 pairs by 1981.

The sedentary populations of the Hampshire/Surrey border are more susceptible to cold winters and hence the population in this area suffered significantly due to the cold winter of 1981/82 with a decline from 163 to 61 pairs.

A series of intensive woodlark surveys were undertaken in the late 1980s and early 1990s. These revealed a population at that time of around 350 pairs. The results of these are summarised in Gibbons et al and reproduced in Table 4.

Table 4

Year	Area	No. pairs	Surveyed by
1988	Hants/Surrey border	100-111	RSPB
1988	Breckland	43	RSPB/Forestry Commission
1989	Breckland	63	RSPB/Forestry Commission
1991	Breckland	93	Forestry Commission
1990	Suffolk coast	78	Suffolk Wildlife Trust
1990	New Forest	51-54	RSPB
1991	Devon	17	DBPS

The severe gales during the late 1980s and early 1990s created many new forestry clearings that increased the available habitat throughout the woodlark's British range. These combined with a series of mild winters resulted in a further expansion of woodlark populations so that by 1994 the population was estimated at about 700 pairs.

This population expansion has continued in recent years. A national woodlark survey was undertaken in 1997. This survey gave a national population of around 1,552 pairs.

The population of woodlark in the Thames Basin Heaths is estimated at 149 pairs or 9.9% of the British population. The three SSSI in the vicinity of Dilly Lane have a population of 30 pairs – about 20% of the SPA population.

6.3.3 Dartford warbler *Sylvia undata*

6.3.3.1 Habitat and ecology

Unlike most other British warbler species, the Dartford warbler is largely resident in this country. The relatively cold winters of Britain are not to the taste of this small bird which is more at home in the heat of Mediterranean latitudes. In Britain, Dartford warblers have become synonymous with dry heathland that is almost exclusively their habitat. Their nest may be within a gorse bush or sometimes in tall mature heather. Gorse provides the predominant feeding habitat for Dartford warbler, as it is richer in invertebrate food than heather.

The extensive heaths of the New Forest hold the nucleus of the British Dartford warbler population. The north east Hampshire and Surrey populations are located in a relatively colder part of the country and are on the edge of the species' British range. These populations are more vulnerable than the coastal populations to the south and west and are susceptible to complete loss in cold winters. However, the recent series of mild winters have seen a significant increase in the population of Dartford warbler in the Thames Basin and Wealden Heaths of Hampshire, Berkshire, Surrey and Sussex.

6.3.3.2 National and SPA population

The national population of Dartford warblers has been sufficiently small for many years to attract significant attention by ornithologists. National surveys have been undertaken from the early 1960s and are summarised in Gibbons et al (1993) and reproduced in Table 5.

**Table 5:
Some recent counts of Dartford warbler in Britain (from Gibbons et al 1993)**

	1960-61	1963	1974	1984	1988-89	1990
Hampshire	350	6	255	219	461	441
Dorset	63	4	286	127	132	334
Surrey	40	0	1	69	54	120
Sussex	4	1	15	0	4	8
Devon	?	0	3	2	12	?

The last national Dartford warbler survey was undertaken in 1994. This recorded a population of 1,800 pairs, showing a further increase on the 1990 population.

The Thames Basin Heaths SPA supports an estimated 445 pairs of Dartford warblers or 27.8% of the British population, making it the second most important SPA for this species in the UK.

7. Description of the likely effects on the integrity of the SPA of housing development

7.1 Research of urban edge effects

The last decade has seen a growing concern over the impact of urban development adjacent to heathland and now features as one of the main factors affecting the conservation of heathlands in England. The wide range of potential effects of urban development were usefully summarised by Leslie Haskins⁶. This comprehensive review considered the following wide range of effects as reproduced by John Underhill-Day⁷ and can be summarised as:-

- Reduction and fragmentation.
- Supporting habitats
- Water issues including disruption of hydrology and pollution
- Roads
- Service infrastructures
- Public access including trampling, fire, disturbance and predation
- Public perceptions and management

The relevance of each of these seven potential effects of urban development are considered in relation to the proposed development at Dilly Lane. Some of these effects are associated with urban development immediately adjacent or within a short distance of heathland sites whilst others have wider regional or sub-regional effects.

7.2 Reduction and fragmentation

7.2.1 Nature of the threat

Habitat reduction and fragmentation is a serious threat to heathland sites throughout England. The resulting islands of heathland are subject to increased pressures from 'edge' effects and the populations of species inhabiting these islands of habitat are subject to increased threat of extinction, for example from fire or other catastrophic events. Once lost from their island of habitat, it is often difficult for them to re-colonise, even if the habitat has recovered. This is particularly true of species with poor powers of dispersal.

7.2.2 Relevance to the Dilly Lane proposed housing

Development of housing at Dilly Lane would not result in any reduction in the extent of heathland or cause any increase in heathland fragmentation.

7.3 Supporting habitats

7.3.1 Nature of the threat

Habitats adjacent to the SPA can have an important influence on its ecological function. This has been well demonstrated for nightjars that forage over quite a wide area beyond the heathland sites upon which they nest. Although the invertebrate fauna of heathlands can be very diverse and specialised it is likely to be of reduced biomass when compared to other more productive habitats. Research into feeding ecology of bats is probably of relevance in this respect. This has

⁶ Haskins, L.E. 2000. Heathlands in an urban setting – effects of urban development on heathlands of south-east Dorset. *British Wildlife*, 4.

⁷ Underhill-Day, J.C. 2005. *A literature review of urban effects on lowland heaths and their wildlife*. English Nature Research Report No. 623. Peterborough

shown the importance of wetlands, woodland clearings and edges, hedgerows and extensively farmed pastures in providing important bat foraging habitats. Radio tracking studies of nightjar in Dorset (Alexander and Cresswell, 1990) suggests they are equally attracted to feed in this range of insect rich semi-natural habitats.

It is likely that nightjars nesting within the SPA near to Hartley Wintney will be feeding at night over a wide area of countryside beyond the SPA boundary including the wetlands along the Basingstoke Canal, Blackwater Valley and River Hart.

7.3.2 Relevance to the Dilly Lane proposed housing

The proposed development site at Dilly Lane could provide potential nightjar feeding habitat as it lies within the average range distance of 3.1km for foraging nightjars from the SPA (Alexander and Cresswell, 1990). However, the area of land involved is so small and of comparatively low potential forage value that this potential effect is not considered significant.

7.4 Water issues including disruption to hydrology and pollution

Housing development can have significant effects upon the hydrology of wet heathlands and mire habitats. None of these habitats are likely to be affected by the proposed housing development at Dilly Lane.

7.5 Roads

The construction of roads introduces a number of threats to heathland habitats. This includes habitat fragmentation, disturbance, increased fire risk and impacts on site management (in particular stock grazing). No new roads are envisaged as part of the proposed housing development (other than internal to the development site) and road construction is not a threat to the SPA from this proposal.

7.6 Service infrastructures

7.6.1 Nature of the threat

Housing development does not confine its impact to the area in which the houses are built. To service these developments, new water supply and sewage systems are required together with electricity, telephone and gas supplies. The provision of this infrastructure frequently requires laying of pipelines or creation of wayleaves that inevitably are placed across areas of open land adjacent to the housing. This can often result in damage to the SPA or supporting habitat from SPA bird populations.

The proposed housing development on Dilly Lane is close to existing infrastructure and it would seem highly unlikely that there will be a requirement to provide additional wayleaves across the SPA or other sites of importance to the SPA to service it.

7.7 Public access including trampling, fire, disturbance and predation

7.7.1 Visitors to the SPA

A number of visitor surveys have been undertaken to determine the use of heathlands for recreation, both in the Thames Basin and Dorset. Of particular value is the survey commissioned by English Nature in 2005. A draft copy of this has been supplied by English Nature to assist with this assessment.

The survey found that:-

- There are 288,000 dwellings within 5km of the SPA boundary.
- Groups of up to 15 people were recorded visiting the SPA, but most people were visiting either on their own (29% of all interviews) or two people (36% of interviews).
- The majority of people visiting the SPA arrived by car (83% of people), and only 13% arrived on foot.
- The median distance people had driven to reach an access point was 3.1km and 70% of car drivers had come from within a radius of 5km from the access point.
- For those people travelling by foot, 90% came from within 1.5km.
- A variety of reasons were given for visiting the heaths, representing a broad range of recreational activities, such as cycling, fishing, picking mushrooms, flying model aircraft, wildlife watching or simply taking the children out.
- Dog walking was by far the most common reason (59% of groups) given for visiting the heaths
- Only 28% of groups interviewed were without a dog and the total number of dogs accompanying the people interviewed was 1,271, equating to 0.6 dogs for every person visiting the SPA.
- Dog walkers walked an average of 2.5km, penetrating a mean of 760m onto the SPA.
- The number of houses surrounding each access point was a significant predictor of visitor numbers using a radius of 5km, but not further.
- The proportion of residents at different distance bands from each access point was calculated and the report suggests this is the most reliable method to model visitor levels
- This figure was used to extrapolate an estimate of the total number of visits to the SPA per annum. A crude estimate of over 5 million visits per annum was calculated, using the assumption that the 26 access points used in the study are representative of all access points within the SPA. Accepting the limitations, the figure of 5 million visits per year, if reasonable, is equivalent to many National Parks.

The English Nature visitor survey sampled three access points within 5km of the Dilly Lane proposed housing development with a further two access points within 6km. These are identified on figure 4. Table 6 summarises the profile of visitors to these points. It demonstrates the variable numbers of visitors to the different access points, the reliance on vehicular transport to most of these and the significant proportion of dog walkers interviewed at each site.

Table 6: Summary of visitor access profiles for access points to the SPA within 6km of Dilly Lane

Access points sampled by English Nature	Distance to Dilly Lane site (straight line)	Number leaving	Number interviewed	% Dog walkers interviewed	% travelled to the SPA by car or van
Point 7 – Southern entrance to Bramshill Plantation	5.6km	2	2	50%	100%
Point 8 – Northern entrance to Warren Heath	5.5km	73	60	78%	86%
Point 11 – Black Bushes Road	4.0km	31	30	90%	97%
Point 17 – Hazeley Heath on B3011 opposite Arrow Lane	1.8km	23	17	76%	71%
Point 18 – Hazeley Heath, play area,	1.6km	50	25	40%	0%

Springfield Avenue					
Mean					

It should be emphasised that access points sampled by English Nature represent only a small proportion of the total access points to the SPA. The English Nature visitor survey estimated the total number of access points to the SPA with car parking spaces to be 150 (based on an audit of access points undertaken by Exergesis for English Nature⁸).

The English Nature visitor survey recorded the routes taken by visitors to each of the access points and mapped these to analyse the distance travelled and degree of penetration into the SPA from the access point. The map at figure 5 is an extract from the English Nature report which shows the meandering paths of visitors from sampled access points, particularly within Yateley Heath Wood, Warren Heath and Hazeley Heath.

Although a definitive survey of access points to the SPA, within 5km of Dilly Lane, has not been undertaken, published information for Yateley Common Country Park identifies four car parks as follows:-

There are four car parks, two of which are adjacent to large grassy areas suitable for picnics and general amenity. There is a car park at Wyndhams Pool off Cricket Hill Lane, and two car parks off the A30 between Yateley and Blackwater. Access to the west end of the site can be best gained by parking at Blackbushe Airport, off the A30.

Only two of these were included in the English Nature visitor survey and both are beyond the 5km zone within which most visitors to the SPA were found to live. These are shown on the map at figure 4.

A more detailed analysis of visitor use from the English Nature Visitor Survey has been undertaken for those parts of the SPA within easy driving distance of Dilly Lane. This reveals:-

- Three sampled access points are within 5km of Dilly Lane with a further two within 6km.
- A significant proportion of visitors to the SPA from these access points are dog walkers (mean = 67%)
- Apart from the access off Springfield Avenue to Hazeley Heath, a very high proportion of visitors travel to the SPA by car or van (Mean 89% excluding Access point 18).
- Visitors to the SPA from these access points walked extensively within Hazeley Heath, Bramshill Plantation, Warren Heath and Heath Warren and Everseley Wood (see map extract at figure 5)
- It has not been possible to undertake detailed analysis of the distance travelled to these five access points from the data available in the English Nature report, however, the map extract at figure 6 shows visitors to the northern entrance to Warren Heath and Black Bush Road (points 8 and 11) to have travelled for considerably more than the average of 5km for the SPA as a whole.

⁸ EXERGESIS (2004). Audit of access points across part of the Thames Basin Heaths SPA. Unpublished database, English Nature Thames & Chilterns Team.

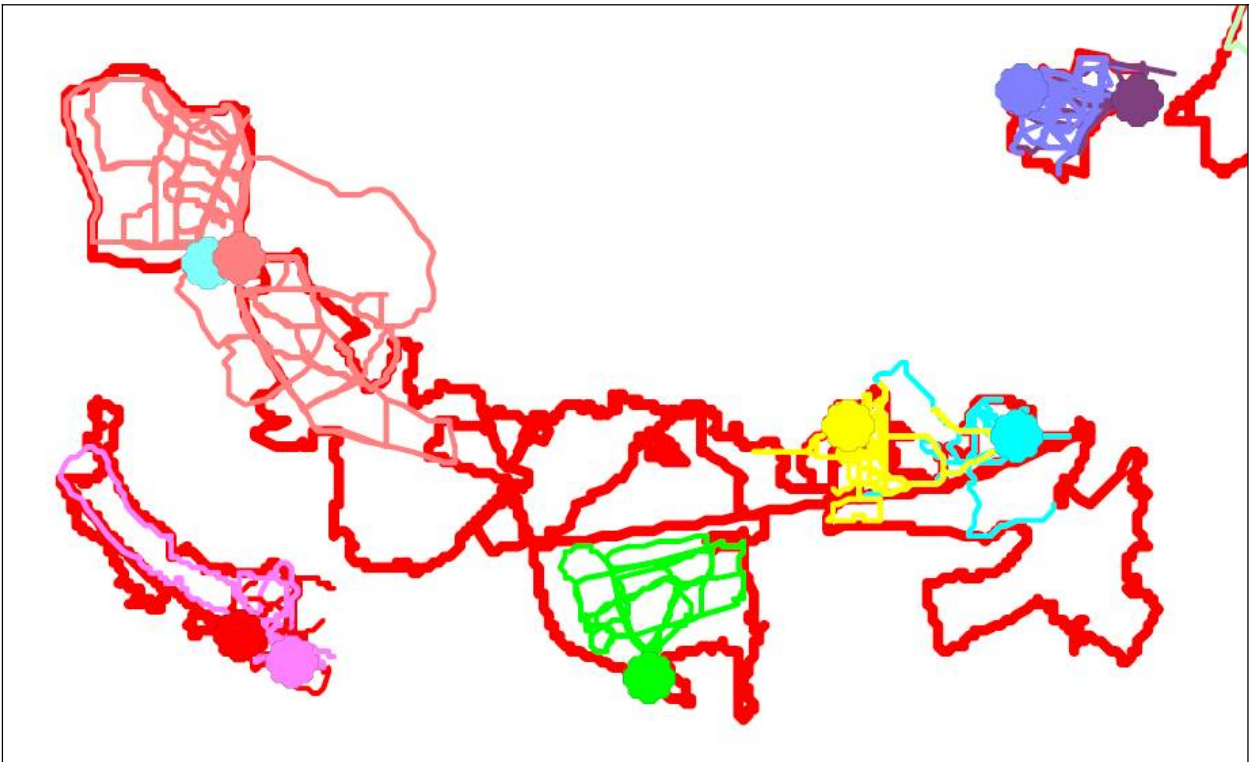


Figure 5: Routes taken by visitors to the SPA from English Nature sample points. Pale blue circle = point 7, Flesh circle = point 8, Green circle = point 11, Red circle = point 17, Pink circle = point 18, Red line = SPA boundary (Not to Scale).

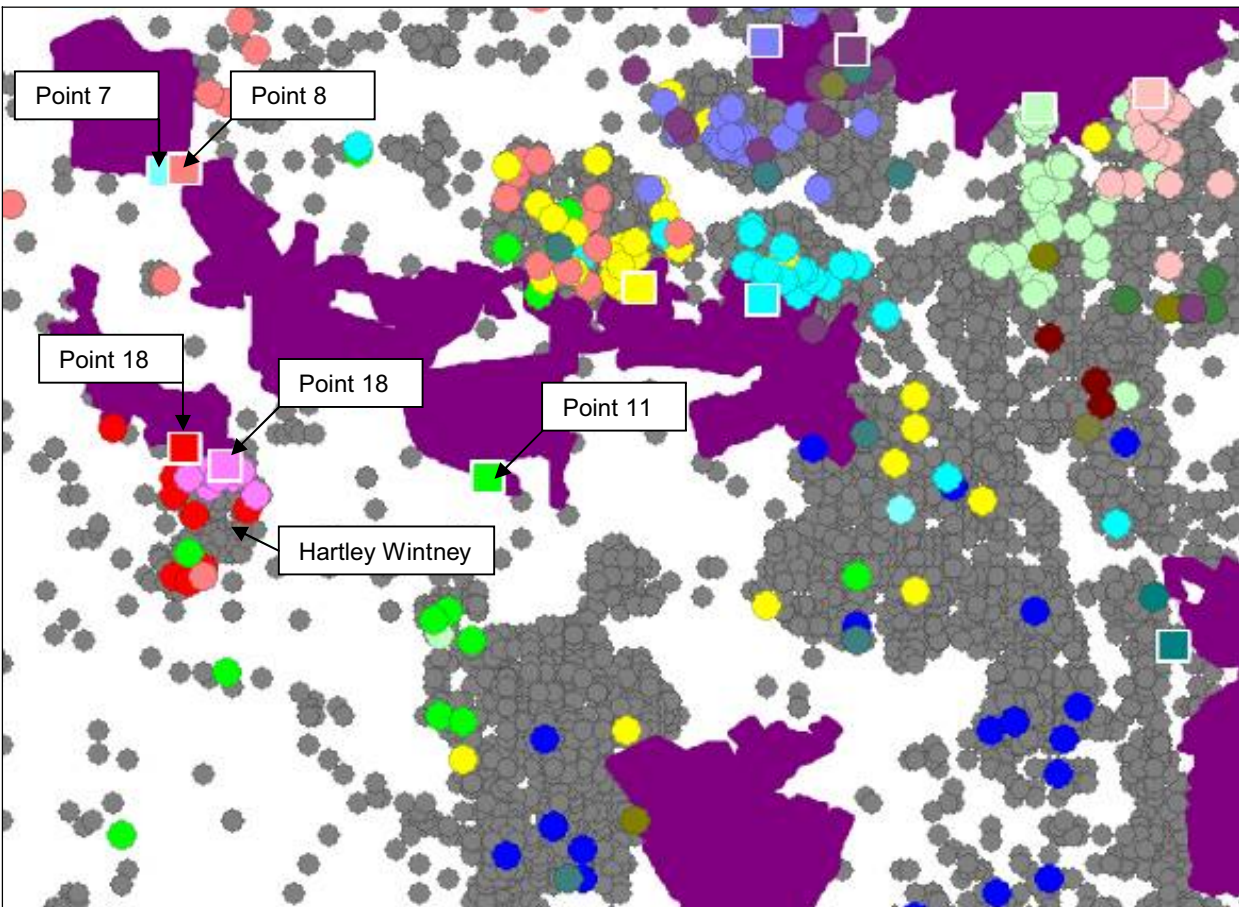


Figure 6: Access points = coloured squares, Post codes of visitors = coloured circles, All post codes = grey circles, SPA = purple polygons (Not to Scale).

7.7.2 Impacts of urban development on the SPA

The need to better understand the effects of urban development on heathland has led to a growing amount of specific research. Liley and Clark (2002)⁹ provided some compelling evidence of the effects of urban development on heathland Annex 1 bird populations. This research took 'urban development' as a surrogate for all the pressures likely to arise from such development. However, recreation and access impacts are likely to have been the most significant of these. Their research found a clear relationship between the proportion of urban development within 500m of a heathland site and the population of nightjars it could support. The data from this study show that sites with more than about 45% urban development within 500m of a heathland site were no longer able to support nightjar populations. No detailed assessment was made of the likely cause of this relationship other than to suggest that the loss of adjacent supporting habitats for feeding and the effects of disturbance and predation were likely to be important. As has been mentioned, loss of supporting habitat is not considered relevant to the Dilly Lane site. This site is also beyond the 500m zone considered by Liley and Clark in their assessment of urbanisation. However, the principle demonstrated by this research is clearly of relevance to the Dilly Lane proposals.

No such relationship could be demonstrated between populations of woodlark or Dartford warbler and the proportion of urban edge development. However the report concludes, 'The fact that no such relationship has been demonstrated for woodlark and Dartford warbler does not mean that factors associated with urban development are not having an effect. The analysis does not consider breeding success for example and although there may be high numbers of individuals on a given site, reproductive success may be very low'.

Further research by Giselle Murison¹⁰ also found a clear link between nightjar breeding success and levels of public access and identified a possible link between nest disturbance and predation by crows and other corvids.

The general effects of public access to the SPA can be sub-divided into a number of specific impact types. These are considered in more detail in relation to the proposed development at Dilly Lane.

7.7.3 Trampling and disturbance from informal recreational use

Trampling refers to the physical effects of walkers, riders, cyclists and motor-cyclists on the heathland habitat. This can be of particular concern to certain specialist heathland species including reptiles and invertebrates that are often associated with the bare ground found along paths and tracks. Trampling can also result in direct loss of heathland habitat due to erosion. This is particularly evident on steep slopes and in wet heathland and mire. Trampling pressure is not however as important to Annex I birds as the more general disturbance of breeding birds resulting from high levels of public access.

As a general rule, the number of walkers, riders, cyclists and motor-cyclists likely to use a heathland will increase with an increase in local population and hence there should be some relationship between housing development and the impact of trampling and disturbance. However, it is unlikely that such an impact will increase in a linear and progressive fashion. What influences people to walk or ride on the SPA and the impact they will have is the result of a number of variables, these will include:-

1. The proximity of the housing development to the SPA
2. The provision of car parks near to the SPA

⁹ Liley D and Clarke R.T. (2002). *Urban development adjacent to heathland sites in Dorset: the effect on the density and settlement patterns of Annex 1 bird species*. English Nature Research Report 463, Peterborough

¹⁰ Murison G. (2002) *The impact of human disturbance on the breeding success of nightjar *Caprimulgus europaeus* on heathlands in south Dorset*, England English Research Report 483, Peterborough

3. The provision of paths and access points into the SPA for walkers and riders
4. Proximity of access points and car parks to sensitive areas of the SPA
5. Availability of alternative destinations for walkers and riders and their relative attractiveness
6. Information provided to visitors to the SPA about the potential impacts associated with their visit.

Although increased recreational use of the SPA arising from the development of the Dilly Lane site may increase trampling pressure on SPA habitats this is not considered to be a cause of significant effect upon the SPA bird populations or the habitats that sustain them.

7.7.4 Fire

Controlled burning is a traditional method of managing heathlands and is carried out today in, for example, the New Forest SSSI/SPA. However, controlled burning is undertaken in the late winter and then only when ground and weather conditions are correct. The aim of controlled burning is to remove the vegetation cover without damaging the often combustible peaty or highly organic heathland soils. Burning therefore takes place when soils are wet or damp and when wind allows for a slow steady burn. Under these conditions burning encourages a 'flush' of heather and grass growth of value to grazing livestock. Burning also creates a niche for a wide range of heathland plants and animals in the newly burnt ground and also regenerates gorse breaks if they have become over mature.

Uncontrolled 'wild fires' in summer and spring fires can be highly damaging to the heathland ecology. These tend to be more intense and can damage the habitat by burning the heathland soils and heather roots. The bare mineral soils may then be rapidly colonised with bracken and invasive tree species or the flush of grass, particularly purple moor-grass, can out compete and dominate the heathland flora - particularly in the absence of stock grazing.

Heath fires are also damaging to heathland birds; nestling birds can be killed by fire, but perhaps more importantly, heathland fire can damage the habitat of nesting heathland birds such as the Dartford warbler.

It is also a paradox that heathland fires can create conditions of attraction to other heathland birds such as the woodlark. The bare ground conditions created by these fires can provide good foraging habitat for this species whose population can increase rapidly in the wake of extensive heathland fires as seen after of the fires of 1976. Heath fires also prevent woodland maturing and can therefore maintain the mosaic of open heathland and woodland that is of attraction to nightjar.

English Nature have commissioned research into the relationship between housing development and heathland fire in north east Hampshire. This was submitted as evidence at a public inquiry into housing development proposals at Fox Farm, Yateley, Hampshire in 1996.

'Countryside Action Fire Watch' kept records of heath and woodland fires from 1984 - 1991 between Yateley and Farnham in north east Hampshire. The area was divided into nine 'districts'. Analysis of the numbers and size of fires during this period was collated for these districts. This shows clearly that greatest number and largest area of fire damage occurred in districts adjacent to significant centres of population such as Yateley (152 fires/70.6ha.), Hawley (181 fires/75.9ha), Fleet (Crookham Common 129 fires/31.3ha) and Aldershot (176 fires/38.3ha). This is supported by evidence from the New Forest where the Hampshire Fire Service have attributed 89% of uncontrolled heath fires to the general public.

Specific studies of fire on Castle Bottom to Yateley and Hawley Commons SSSI in 1995 and 1996 provided further evidence of the relationship between housing and heathland fires with a total of 85 fires recorded. It is interesting that this study also showed that fires in the forestry plantations were rare, even though abundant combustible material is present. Detailed analysis of the location of these 85 fires shows distinct clusters of fire associated with housing

development, especially where provision is made to concentrate people, such as around car parks and access points onto the heathland.

Information provided by the Yateley Fire Brigade is also of relevance. From a total of 54 fire incidents recorded from Yateley Common/Blackbush in 1994/95 only 6 (11%) occurred in the winter months when damage would be expected to be temporary. The hot summer months of June to August, when damage to heathland vegetation and fauna is likely to be most significant, accounted for 41 (76%) of the number of fires.

The Dilly Lane site is some 1.5km from the southern edge of Hazeley Heath and the SPA boundary. Although access to the SPA from Dilly Lane is most likely to be by car, the English Nature visitor survey found that 90% of visitors to the SPA on foot came from within 1.5km. Hazeley Heath is just on the limit of the normal range of visitors that walk to the SPA. However, as most heathland fires within the SPA are likely to be started by children and young people it is unlikely that the housing development at Dilly Lane will result in a significant threat from fire to the SPA.

7.7.5 Cat predation

Cats are voracious carnivores whose population level can be sustained at very high densities as a result of domestication. A recent analysis of figures produced by the Target Group Index¹¹ found that 23% of households own at least one pet cat, with 13% of households having one cat and 10% having two or more cats. The results of the Target Group Index and other surveys suggests a figure of 320 – 330 cats per 1000 households.

Research undertaken by Michael Woods on behalf of the Mammal Society¹² provides some indication of the impact of domestic cats on wildlife. This study recorded the numbers of birds and animals killed by a sample of 950 cats throughout Britain. Conclusions of this research show the following:

- Cats in urban situations kill an average of 30 birds and other animals/year
- Cats in rural situations kill an average of 40 birds and other animals/year
- Some cats kill considerably more than others with a maximum of 150 birds and other animals killed by one cat
- 13 species of birds had 30 or more individuals of that species killed, these were mostly garden birds
- Reptiles killed included slow worm, grass snake and common lizard with common lizard being particularly vulnerable
- Small mammals killed included unusually large numbers of harvest mice
- Cats are 28 times more numerous than foxes and 5 times more numerous than all other natural predators in the Britain.

The most detailed study available of domestic cat predation and behaviour was undertaken by Barratt (1995)¹³. This study included detailed prey analysis and radio tracking of cats within sub-urban Canberra, Australia.

This study showed that:-

1. Variation in the amount of prey caught by individual cats is large ranging from 0 to 72 prey items per year. However, 70% of cats were seen to catch less than 10 prey items per year with only 6% being relatively prolific hunters taking between one and two prey items per week on average over 12 months.

¹¹ Saul, J. 2000. Cat ownership amongst the general public. Unpublished report to the RSPB, Sandy.

¹² Woods, M. Macdonald, R.A and Harris, S. 2003. Predation of wildlife by domestic cats *Felix catus* in Great Britain. *Mammal Review*, 33, 172-188.

¹³ Barratt, D.G. 1995. Prey habits and movement patterns of house cats in Canberra, Australia. *Executive summary of MSc Thesis*. University of Canberra.

2. 63% of prey were small mammals (mostly house mice)
27% of prey were birds
8% of prey were reptiles and amphibians
3. All amphibians and 62% of mammals were caught at night.
4. 70% of birds and 90% of reptiles were taken in daytime.
5. Of 10 cats fitted with radio-collars 4 moved into open-forest and rural woodland habitat adjoining the urban environment.
6. The largest distance moved away from the sub-urban environment was 900m, with other cats moving 810m and 760m.
7. Movements greater than 100-200m from the suburban edge were always made at night.

The report also makes some management recommendations for reducing the impact of domestic cats on wildlife populations. It suggests that:-

- There should be a 1 kilometre buffer zone around habitat containing fauna potentially threatened by predation from house cats at night and at least 200m where threatened populations are diurnal species (active in day time).
- Roads placed between houses and ecologically significant habitats may restrict cat movements

Given the distance from the Dilly Lane site to the SPA boundary is over 1km there is no realistic threat to the SPA from cat ownership by residents of any new development at this site.

7.7.6 Disturbance by people and dogs

As mentioned above, the level of urban development around Dorset heaths was used by Liley and Clarke as a surrogate for the level of human impact on Annex 1 bird populations and it is likely that a significant cause of the impact detected was due to disturbance by people and their dogs. A similar effect was also found by Murison as mentioned above. In particular her research showed:-

- Breeding nightjars are at lower densities and have poorer breeding success at sites with higher levels of visiting compared to those with little or no public access.
- On disturbed sites the proximity of paths correlate strongly with nest failure up to 225m from the path edge.
- Predation of nightjar nests is higher where there are more paths in the vicinity and where the nest is closer to a path.
- There seems to be strong link between increased site disturbance, by dog walkers, higher predator numbers on disturbed sites and higher predation rates on nightjar nests.

Dogs are by nature hunting animals, indeed most of the more popular breeds of dog have been specifically bred to hunt. Dogs usually hunt by smell and hence dogs will systematically quarter the ground in pursuit of prey. This makes ground nesting bird species such as woodlark and nightjar particularly vulnerable to disturbance. Although birds are adapted to low levels of disturbance, the period of time they are away from the nest leaves the eggs and young vulnerable to predation and chilling. Beyond a certain threshold level of disturbance birds are liable to abandon their nest in search of a less disturbed location.

The national percentage of households in England owning dogs is 26.6% (6.5 million) with an average of 1.3 dogs per household. With an estimated 170 new dwellings being constructed at the Dilly Lane site, that would increase the number of dogs requiring exercise by some 221. Most of these will require a walk at least once per day and many will be walked twice a day.

It is difficult to predict the proportion of dog owners from housing development in Dilly Lane that are likely to walk their dogs on the SPA. Given the results of the English Nature visitor survey it is

likely that a proportion of the new residents would visit the SPA for recreation and in particular to exercise their dogs. However, it is also apparent that new residents of any housing development on Dilly Lane will have a wide choice of other semi-natural and more formal green-spaces within 5km of Dilly Lane to use for recreation and dog walking. These alternative areas of green space are listed in table 7 with distances from Dilly Lane.

Table 7: Areas of alternative green space within 5Km of Dilly Lane allocation site

Site name	Distance from Dilly Lane site	Comments
Odiham Common	2,500m	Extensive area of wood pasture SSSI, managed by Hart District Council
Hook Common and Bartley Heath	4,000m	Extensive area of heathland and secondary woodland, partly managed by the Hampshire Wildlife Trust as a nature reserve.
Basingstoke Canal (Greywell Fen)	4,700m	Linear and circular walks available along the canal, managed by Hampshire County Council
Michelle Avenue Recreation Ground	430m	Urban recreation ground within Hartley Wintney
St Mary's Church Yard	480m	
Phoenix Green Common	820m	Common land inter-woven within the village centre of Hartley Wintney
Elvetham Heath Nature Reserve	3,650m	Large nature reserve managed by Hart District Council
Holt Lane Country Park	2,700m	Country Park bordering the river Whitewater
West Green Common	1,510m	Semi-natural woodland and common
Calthorpe Park	4,050m	Sub-urban park within Fleet

It is apparent from this analysis that new residents of Dilly Lane would have a wide choice of green space to use for recreation and dog walking including that within the SPA. This must increase the threat of adverse effect on the SPA and will be considered further in the assessment matrix in section 8 and section 9 on mitigation.

7.8 Public perceptions and management

During the 20th century the heathland landscapes of southern England changed dramatically. At the beginning of the century these were mostly treeless open landscapes dominated by heathers and gorse. At the close the century many had been destroyed by housing or agricultural developments whilst perhaps the majority had been converted to wooded landscapes, either forestry plantations or through natural regeneration initiated by the absence of traditional stock grazing and other heathland management practices. In recent years, increasing efforts have been made to reverse the decline and loss of heathland habitats. This has resulted in large areas of tree and scrub clearance and the re-introduction of appropriate stock grazing regimes. Although this management is restoring an historic landscape, it is very different to the one that has developed over the latter part of the 20th century. The dramatic changes in landscape that heathland restoration requires frequently invokes strong opposition by local people who resent these changes. The fencing required to facilitate the restoration of stock grazing is also seen as a restriction on liberty and is also opposed. It is often new housing developments on the edge of former heathlands from which opposition to nature conservation management arises. This requires the input of considerable time and effort to resolve. In many instances, the opposition is

sufficient to prevent, delay or substantially compromise the heathland restoration project. However, where such conflict can be avoided, by locating housing developments away from heathlands or by designing them to minimise the potential for conflict these measures should be taken.

The recent public inquiry into proposals to restore grazing to Odiham Common SSSI for nature conservation and the rejection of this by the inquiry inspector clearly demonstrate this potential conflict. However, Hart District Council has undertaken a programme of education and awareness raising to increase public understanding of the need to conserve and manage heathland and has had great success in restoring conservation grazing to Elvetham Heath Nature Reserve. Given these initiatives and the distance of the proposed housing at Dilly Lane from the SPA boundary, this potential effect is not considered to be significant and is not considered further in this assessment.

7.9 Dumping of garden waste and nutrient enrichment

The perimeter of housing estates abutting areas of semi-natural vegetation such as heathland and woodland is often marked by an abundance of dumped garden waste and other refuse. In addition to being unsightly this dumped material, particularly of garden waste, can have significant effects on the nature conservation value of these semi-natural habitats. This results from localised increases in soil nutrient levels which promote the growth of coarse vegetation at the expense of heathland vegetation and more importantly from the introduction of non-native plant species to the SSSI. These can smother the natural vegetation or more insidiously reduce the overall natural character of the SSSI, again reducing its nature conservation value.

The Dilly Lane site is approximately 1.5km from the SPA boundary and is therefore sufficiently far away to avoid the 'over-the-garden-wall' effect of garden waste disposal on the SPA. There is some potential for waste to be dumped from cars, but as most of the car parks are also some distance from the SPA boundary it is not thought likely that there will be a significant impact of increased garden waste tipping directly onto the SPA. This potential impact is not considered further in the assessment.

8. Assessment of impacts of proposed housing development at Dilly Lane against nature conservation objectives

The review of potential effects in relation to the Dilly Lane housing development proposal undertaken in section 7 identified the increased disturbance by people and dogs as being potentially significant.

8.1 Public access including disturbance by people and dogs

The impacts of disturbance to Annex 1 birds by people and their dogs using the SPA for informal recreation is considered potentially significant. To make an assessment of this in view of the conservation objectives of the SPA, this impact has been considered in the following impact matrix. This considers this impact alone and in combination with other plans and projects.

8.2 Impact matrix for disturbance by people and dogs

Nature conservation objectives	Alone (as described in section 4)	In combination with other plans or projects (as reviewed in section 3.5)
<p>Objective 1: Maintain the population of each of the three Annex 1 bird species as a viable component of its natural habitats on a long-term basis.</p>	<p>Increased recreational disturbance, particularly from dog walkers to parts of the SPA is possible. This will emanate from and be focussed by the provision of car parks. These impacts could result in a reduction in Annex 1 bird populations within the SPA. However, given the range of alternative recreational green space in the vicinity of Hartley Wintney this impact would be unlikely to have an adverse effect on site integrity alone.</p>	<p>Using increased housing development as a surrogate for increased recreational disturbance from people and dogs, it can be seen that the proposed development of the Dilly Lane site (DEV 9) is part of a trend that has seen the progressive urbanisation of the SPA. This trend looks set to continue and points to a pattern of progressive loss of site integrity.</p>
<p>Objective 2: Maintain the range (geographic extent) of the population of each of the three Annex 1 bird species for the foreseeable future.</p>	<p>Increased pressure from recreational use and dogs walkers in the vicinity of car park may cause a limited reduction in the range of Annex 1 birds in the most publicly accessible parts of the SPA (mean distance travelled by visitors into the SPA from access point is 760m).</p>	<p>The numerous access points to the SPA for visitors in motorised vehicles within 5km of urban development, both recently completed, approved but uncompleted or planned has the potential to cause range contraction of Annex 1 bird populations away from these access points and in combination is likely to have an adverse effect on site integrity.</p>
<p>Objective 3: Maintain sufficient area of suitable habitat to maintain the populations of each of the three Annex 1 bird species on a long term basis.</p>	<p>There is no realistic threat of loss of habitat due to the proposed housing development.</p>	<p>Recreational use, including disturbance from people and dogs, is not likely to have an adverse effect on the extent of habitat within the SPA either alone or in combination.</p>

8.3 Residual impacts

It is concluded that in the absence of mitigation measures the 'in combination' effects of housing development at Dilly Lane could have an adverse effect upon the integrity of the Thames Basin Heaths SPA. This conclusion has been reached taking the following factors into account:-

1. Housing development at Dilly Lane is likely to increase general levels of recreational pressure and in particular disturbance from people and dogs, most particularly on parts of the SPA with good car parking provision within 5km of the development site.
2. This level of increase is likely to be small given the significant amount of alternative recreational green space that is also within 5km of Dilly Lane (see section 7.7.6).
3. The proposed housing development at Dilly Lane is part of a longer term trend of increased housing development in the vicinity of the SPA that is likely to be having a continuing and cumulative impact.
4. Taking increased housing development as a surrogate measure of recreational pressure, it is concluded that in combination with other housing development in the vicinity of the SPA, the incremental increase in recreational pressure arising from the proposed Dilly Lane housing allocation could have an adverse effect on the integrity of the site.

9. Measures proposed to mitigate or otherwise offset adverse effects arising from the proposed housing developments

9.1 The Thames Basin Heaths Area Based Delivery Project

English Nature is developing a Delivery Plan for the Thames Basin Heaths SPA that seeks to provide a framework in which to determine mitigation requirements to offset the impacts of recreational pressure from housing development. In particular it seeks to identify generic mitigation standards, to be met for housing development through 'up front' infrastructure provision. This will normally be the provision of alternative natural green space referred to be English Nature as **Suitable Accessible Natural Green Space (SANGS)**.

The Delivery Plan is a key component of a three part approach to mitigating recreational impacts. These are summarised by English Nature as follows:-

1. *'Off site mitigation in the form of alternative green-space for recreation; this is the Delivery Plan itself. The key feature of this package is the mechanism to avoid increasing visitor pressure, arising from populations in new residential developments, through provision of functional green infrastructure to cater for local needs.*
2. *On site access management to mitigate for the impacts of current and future users of the SPA. Access management plans, informed by visitor surveys carried out in 2005, will be produced for each component SSSI. These will include a range of measures including alterations to car-parks and footpaths, information boards, and way-marking. This measure is necessary to reflect the fact that some people will always wish to use the heaths for recreation, regardless of off-site alternatives; English Nature do not seek to stop this, but to avoid or minimise the effects of such activity as takes place through careful management.*
3. *On site habitat management to bring the SPA into favourable condition, ensuring that the habitat structure across the site is suitable for the three notified species; nightjar, Dartford warbler, and woodlark. This is being carried out by the SPA landowners with advice from English Nature.*

It is important to note that all three approaches are required in parallel to safeguard the SPA from recreation impacts that may arise from new housing development.'

The Delivery Plan is still in draft form but has been used as guidance to help identify the likely level of mitigation necessary to offset impacts from housing development at the Dilly Lane site.

Dilly Lane is some 1.5km from the SPA boundary and falls within Zone B of the Delivery Plan – that is housing between 2km and 5km from the SPA boundary. In Zone B, English Nature proposes that:-

1. A green-space mitigation standard of **16 ha per 1000 population** is adopted as the minimum required to provide mitigation,
2. That access management considerations (on-site and off-site) need to be adopted through strategic planning (i.e. not necessarily linked to specific developments) in parallel with green-space mitigation delivery.

Using this standard, to mitigate for an estimated increase in population of 408 would require the provision of at least $408/1000 \times 16\text{ha} = 6.528\text{ha}$ of natural green-space.

However, the provision of alternative natural green-space is not in itself sufficient to offset recreation impacts on the SPA and further access management is needed. English Nature envisages this being provided through strategic planning. It may be appropriate to consider adopting further policies within the First Alternation to the Local Plan to ensure that access management plans are developed and implemented

for those parts of the SPA within Hart District. These would be developed in consultation with English Nature and the main owners and managers of the SPA in the District. They would aim to minimise the effects of public access and recreational use through careful management and would include a range of measures including alterations to car parks and footpaths, information boards and way-marking.

9.2 Mitigation currently proposed

The prospective developer of the Dilly Lane site has proposed mitigation in the form of new alternative green-space. This would be provided in the field to the east of the Dilly Lane development site as shown in figure 7. It comprises a mix of woodland, scrub and hay meadow to be managed to create an informal area of recreational green-space. It would link with an existing public footpath on its southern side that provides access to Phoenix Green to the west and the 'Three Castles Path' to the east. This long distance path runs for 60 miles and links Windsor Great Park with Winchester. It is based upon the journeys of King John in the 13th century and includes a visit to the castle he built at nearby Odiham.

In addition to the provision of alternative green-space, there would also be the provision of an information pack for new residents to highlight the open spaces in the vicinity of the development and value and sensitivity of the SPA to recreational disturbance.

9.3 Effectiveness of proposed mitigation

The alternative green-space proposed has the potential to provide a natural extension to the habitats found on Phoenix Green to the west of Dilly Lane and is likely to provide a good alternative for day to day dog walks for the residents of the development. It will also link with an existing long distance foot path and with the wide footpath network around Hartley Wintney and could help to meet the requirements for longer walks, such as those taken at weekends. However, the current area of green-space offered extends to a total area of only 5.78ha and is therefore 0.748ha smaller than the minimum requirement using English Nature's recommended minimum. It could be argued that this is a generic standard for green space based on average occupancy rates and could be modified to meet individual circumstances, however, in the absence of any more refine method of calculating a more accurate area of green-space it is considered inadvisable to depart from the standard 16ha/1000 population. To conform to this minimum standard would require the provision of an additional area of open space, a reduction in number of dwellings to about 150, or a more accurate prediction giving lower occupancy rates in the new development. However, this sort of detailed refinement of the mitigation should be provided at the planning application stage and is not appropriate for the more strategic assessment of the local plan allocation that is the subject of this assessment.

The provision of information packs for new residents is a welcome mitigation measure but it is only likely to be effective for the first occupants of the new dwellings and this information will need to be re-enforced by regular provision of such information to the community as the occupants of the development change.

Further details will be required at the planning application stage to identify funding and management mechanisms for maintaining the green-space provided in the long term and to sustain the level of information provision to the residents of the new dwellings into the future. However, it is anticipated that providing these details can be agreed and the green-space provision standard can be met, this should satisfy the mitigation requirements of the Delivery Plan.

However, to ensure no adverse effect on the integrity of the SPA, it will be necessary to implement the two other elements of the English Nature Delivery Project, namely the provision of Access management Plans and on site management of SPA to maintain or restore favourable

condition across the site for the three Annex I bird species. Consideration should be given to the adoption of policies in the First Alteration to the Local Plan to facilitate the delivery of these elements of the mitigation.

MAP 2 Additional Informal Open Space

KEY

Existing Habitats & Features:

- Existing Woodland
- Existing Gate
- Existing Footpath

Proposed Habitats & Features:

- Parkland-type Trees
- Hedge
- Woodland Planting
- Scrub Mosaic
- Hay Meadow
- Proposed Footpath
- Proposed Benches

Total Area of Proposed Habitats = 5.78 ha

SCALE: 1:1,500 at A3



Ecological Planning & Research

CLIENT: Barratt Homes/Luckmore Ltd

PROJECT: Dilly Lane

DATE: 14/09/2007



Figure 7. Mitigation land proposed by prospective developers of the Dilly Lane site

10. Conclusions

- 1 The Thames Basin Heaths Special Protection Area has been classified under the provisions of the EU Birds Directive in recognition of the internationally important populations of rare and endangered bird species listed on Annex I of the Directive that it supports. The SPA comprises some 13 Sites of Special Scientific Interest (SSSI) spread over three counties. Three of these SSSI are within 5km of the proposed development at Dilly Lane (Hazeley Heath, Bramshill and Castle Bottom to Yateley and Hawley Commons).
- 2 Following discussion with English Nature it has been concluded that housing development at Dilly Lane is likely to have a significant effect upon the SPA.
- 3 An assessment of the likely impacts of this housing allocation in the First Alteration to the Local Plan is has been made in view of the conservation objectives for the SPA, taking into account a range of potential impacts of urban development on heathland habitats. This assessment is required under the provisions of the Habitats Regulations (1994) for all plans or projects likely to have a significant effect upon a European wildlife site such as the SPA.
- 4 It is concluded that the combined impacts of this number of houses would be likely to have an adverse effect upon the integrity of the SPA. The most significant source of impacts would be those arising from public access and especially dog. This is considered especially likely given the cumulative impact of housing development on the site over recent years.
- 5 Mitigation measures have been proposed that would reduce the likely impact of the proposed housing on the SPA. These are based upon the provision of green-space adjacent to the development site that would act to provide an alternative recreational resource for the new residents of Dilly Lane.
- 6 The effectiveness of these mitigation measures has been assessed against English Nature's emerging mitigation standards for residential development. Central to this is an Area Based Delivery Plan that sets a standard for green space provision of 16ha/1000 population. However, to be effective further measures are required at a strategic level to develop Access management Plans and to manage the SPA to maintain and restore favourable condition across the site. These strategic elements could be bought forward through the adoption of appropriate policies in the Local Plan.
- 7 It is concluded that the elements of appropriate mitigation are available to offset the potential impact of housing development at Dilly Lane on the Thames Basin Heaths SPA. At a strategic level these should be sufficient to allow this site to be allocated for housing development. However, it will be necessary for any planning application that follows from the local plan allocation to provide sufficient detail to ensure the mitigation achieves its objectives. These will include,
 - Detailed information concerning the long-term management and funding arrangements for the alternative green-space provision,
 - Adjustments needed to the numbers or types of houses proposed or the area of green-space provided to meet the Delivery Plan standard.
 - Further detail concerning arrangements for the provision of information packs to new residents.
 - A mechanism to ensure residents of the Dilly Lane development remain informed about the provision of alternative green-space and the sensitivity of the SPA in the long term.

In addition, measures need to be taken at a strategic level to:-

- Develop access management plans for the component SSSI in the Thames Basin Heaths SPA.

- Work with English Nature to ensure appropriate habitat management across the SPA and in particular those areas under direct management control of the local authority.
- 8 Implementation of mitigation proposals with these objectives are likely to deflect recreational pressures away from the SPA and ensure better management of the SPA so that it can better withstand recreational use. However, it may be necessary for the local authority to undertake a further appropriate assessment of any planning application that is made subsequent to the allocation of the Dilly Lane site in the local plan. This will be required if the English Nature Delivery Plan has not been fully implemented. It will need to assess in greater detail the effectiveness of the mitigation measures and delivery mechanisms proposed by the developer, make a more detailed analysis of 'in combination' effects on the SPA and consider the effectiveness of wider strategic mitigation measures proposed by English Nature.

Jonathan Cox
March 2006

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Acknowledgements

I should like to thank the following people for providing information and advice in the preparation of this report.

Richard Hawkey and Ian Phillips (Hart District Council), Vanessa Burley (English Nature).

Appendices

1. Appendix I: Thames Basin Heaths SPA Citation and Departmental Brief including site maps.

